

## Transcript Exhibit(s)

Docket #(s):	E-01461A-09-0450	-		
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Arizona Corporation Commission

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### BEFORE THE ARIZONA CORPORATION COMMISSION VED

COMMISSIONERS
KRISTIN K. MAYES – CHAIRMAN
GARY PIERCE
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP

IN THE MATTER OF THE TRICO ELECTRIC ) COOPERATIVE, INC.'S APPLICATION FOR ) APPROVAL OF A NET METERING TARIFF. )

OCT 2 7 2010

ARIZONA CORP. COMM 400 W CONGRESS STE 218 TUCSON AZ 85701

**DOCKET NO. E-01461 A-09-0450** 

INTERVENOR COMMENTS ON WHY TRICO'S NET METERING ADMINISTRATIVE CHARGE IS NOT REASONABLE AND DOES NOT COMPLY WITH ACC RULES

Intervenor, James M. Arkoosh, hereby files comments asserting TRICO's Net Metering Administrative charge (under its Net Metering Tariff) is not fair and reasonable and does not comply with the Arizona Corporation Commission Rules.

- I. **Issues:** There are several issues to decide.
- A) Is the Smart Synch Metering System, as described by TRICO in its filing dated September 30, 2010, the most efficient system for collecting information required by the ACC Net Metering rules (i.e. monthly "delivered" and "received" kWh amounts)?
- B) Does the daily collection of "30 minute interval" (as filed) or "15 minute interval" (as installed) data greatly exceed the information required by the ACC Net Metering Rules and thereby place an unreasonable burden on and discriminate against Net Metering customers?



- C) Has TRICO met its burden to provide a reasonable study of facts and alternatives and a review of cost/benefit of various suggested alternatives?
- D) Has TRICO met its "Burden of Proof" by its original submission and various belated data submissions? Or is this data merely a late defense of their unsupported original submission?
- II. **Legal:** The controlling law to resolve these issues is found in the Arizona Corporation Commission's Article 23 "Net Metering Rules" which were approved by the Commission on October 26<sup>th</sup> 2008 and certified into Arizona law on May 23, 2009. I find no Arizona interpretation of these new laws and believe this is a case of first impression

#### Relevant net metering rules include:

R14-2-2305: Establishing limits on new and additional charges with these basic principles:

- 1) Net metering charges shall be nondiscriminatory.
- 2) Such charges shall be filed with and approved by the Commission.
- Any charges shall be fully supported with cost of service studies and benefit/cost analysis.
- 4) The utility shall bear the burden of proof on any proposal for a new or changed fee.

In addition to rules on qualifications and eligibility (R14-2-2303), the net metering rules place additional requirements of registry and the monthly accumulation of the kilowatt-hour (kWh) of electricity flowing in both directions in **each billing period**. R14-2-2304. (**Note**: Two numbers are needed at the end of each billing period. The amount "delivered" and the amount "received". **No more**. R14-2-2305 and R14-2-2306.

Ill. Analysis: "Charges shall be fully supported with cost of service studies and benefit/cost analysis." The enactment of Net Metering Rule R14-2-2305 has added discipline and protection to residential solar generation customers. No longer can utilities simply throw a proposed rate at the Commission and see what the staff throws back. The standard is more than fair and reasonable. It requires more thorough analysis, disclosure and puts the burden on the utilities and staff to get it right.

#### Fully Supported – Cost of Service Studies – Benefit/Cost Analysis

This Court must look to the "plain meaning" of these words in the context of the strengthened standard and clear burden of proof in evaluating TRICO's submission and staff conclusions.

1) Clearly no one can find, in either form or substance, a "fully supported cost of service study with benefit/cost analysis" in TRICO's submission of September 18, 2009 and staff's order of January 5, 2010. These submitted documents totally fail to meet the standards imposed by R14-2-2305. In fact neither TRICO nor Staff mention R14-2-32205 in their submissions.

- 2) In addition, TRICO's belated submission of additional information (dated April 8, 2010) to the docket to support its position was a weak attempt to submit information (not provided originally to staff and consisting mainly of prior answers to this Intervenor's questions). There is no attempt to form these items into a study, include analysis or consider benefit/cost issues. This is hardly a "fully supported study with benefit/cost analysis" but more an attempt to toss in everything they have in their files and see if anything sticks.
- 3) TRICO's most recent submission dated September 30, 2010, while more informative than prior submissions, it continues to fail to meet the test of R14-2-2305 as follows:
  - a) TRICO provided additional support for its position but failed to provide even the most basic study. It merely tries to justify its prior submissions. Interestingly, while mentioning R14-2-2305, TRICO never discusses its compliance with the Rule.
  - b) A fully supported study would warrant independent third party opinion or information; not solely TRICO's voice. Net Metering is new and a thorough review of options should be presented.
  - c) The new administrative requirement under the Net Metering Rules is the collection of two numbers which are needed for billing: Monthly kWh Delivered and Received. Instead, TRICO seeks to charge Net Metering customers for a sophisticated software system

that gathers data every 15 minutes and transmits 30 times a month via more expensive cellular technology. Why all the data collection when the Net Metering rules require **only two month end numbers?** As a Net metering customer I never see any of this data; only month end numbers on my billing statement? Why is TRICO burdening Net Metering customers with all this extra data collection and expense?

- d) TRICO states in several documents that interval reporting is required but provides no reasoning or support. See Exhibit A, where on February 22, 2010, an independent Solar Installer states "...there is no need to collect anything more than monthly readings." [We are not disputing the need for bi-directional hardware but assert that the Smart Synch software gathers data (nearly 96 times a day) and communicates 30 times per month when the Net Metering Rule requires just two numbers at the end of each month.] Charges for this added information is not included in the Net Metering Rules and should not be charged to Net Metering customers
- e) TRICO provides no justification for this excess data collection nor do they discuss alternatives you might find in a "fully supported study".
- benefit information falls flat. In its September 30, 2010 submission it tries to compute a hypothetical monthly cost to physically collect data from the Intervenor. This fully costed computation is \$38.31 for one

resident. But it ignores potentially 30 or more additional Net Metering

customer in the nearby area, Using TRICO's reasoning this would

lower hypothetical costs (\$38.31 divided by 30) to an average monthly

cost for physical data collection to a charge of \$1.28. Less that the

standard customer costs of data collection - \$1.62 which TRICO has

previously received Tariff approval.

IV. Relief Requested

1) On behalf of all Net Metering customers, I request that this Court and the

Commission provide clarification to the meaning and application of R14-2-

2305.

2) For all TRICO Net Metering customers, I request the Commission suspend

the current \$3.38 per month Net Metering Administrative charge until

TRICO provides a fully supported cost of service study, including

benefit/cost analysis.

3) For all TRICO Net Metering customers, Order TRICO to refund to each

applicable member all Net Metering Administrative charges collected since

February 2010.

Respectfully submitted this 27<sup>th</sup> day of October 2010

ámes M. Arkoosh

∕65227 E. Emerald Ridge Dr.

Tucson, AZ 85739

Enclosure: Exhibit A

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Original and 13 copies of the foregoing Filed this 27<sup>th</sup> day of October, 2010 with:

Docket Control Arizona Corporation Commission 400 West Congress Tucson AZ 85701-1347

Copy of the foregoing hand-delivered/mailed This 27<sup>th</sup> day of October, 2010 to:

Jane L. Rodda, Administrative Judge Arizona Corporation Commission 400 West Congress St. Tucson Az.85201

Lyn Farmer, Esq.
Chief Administrative Law Judge
Hearing Division
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

Janice M. Alward, Esq. Chief Counsel, Legal Division Arizona Corporation Commission 1200 West Washington Phoenix, Arizona 85007

Steve Olea Director, Utilities Division Arizona Corporation Commission 1200 West Washington Phoenix, Arizona 85007

Michael W. Patten Jason D. Gellman One Arizona Center 400 East Van Buren St., Suite 800 Phoenix, Arizona 85004

Ву

James M. Arkoosh

## REHEARING MAR 1 5 2010

# ORIGINAL

#### **Before the Arizona Corporation Commission**

February 22<sup>nd</sup>, 2010

#### Commissioners

Kristen K. Mayes, Chairman Gary Pierce Paul Newman Sandra D. Kennedy Bob Stump

Comments on the APPLICATION FOR REHEARING Docket No. E-01461A-09-0450

Decision No. 71462

Submitted by: Kevin Koch, President Technicians For Sustainability, LLC 612 N. 7<sup>th</sup> Ave. Tucson, AZ. 85705 RECEIVED

FEB 2 2 2010

ARIZONA CORP. COMM
400 W CONGRESS STE 218 TUCSON AZ 8570\*

Arizona Corporation Commission
DOCKETED

FEB 23 2010

**DOCKETED BY** 

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This document is filed in support of the application for Rehearing filed on February 3, 2010.

We feel that deeper consideration should be given to the matter of a monthly charge for metering electricity for homes with solar systems. Although the requirements of the Trico net metering tariff are appropriate for customers who wish to have Time Of Use (TOU) net metering, it is unnecessary and onerous for non-TOU customers. The majority of the Trico customers we have worked with do not have TOU metering, nor would it be advantageous for them with a solar electric system. Without TOU metering, there is no need to collect anything more than monthly readings. TEP does not require such meters, and does not have a charge for reading the meters of customers with solar systems.

Although this will not have a big impact on the cost of large systems, customers with modest electrical usage and small systems will lose a significant portion of their return on investment to this unnecessary monthly metering charge.

In keeping with your history of strong advocacy and support for distributed generation, we hope that you will reconsider this aspect of the TRICO net metering tariff.

Based on the discussion above, we believe the proposed TRICO monthly Administrative Fee for Net Metering data collection and communication is **not needed** or supported by TRICO and fails to satisfy the Rules under R14-2-2305.

Sincerely

Kevin Koch

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Exhibt A

# BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
KRISTIN K. MAYES – CHAIRMAN
GARY PIERCE
PAUL NEWMAN
SANDRA D. KENNEDY
BOB STUMP

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DEC 0 1 2010

DOCNET CONTACT ARIZONA CORPORATION COMMISSION
HEARING DIVISION

IN THE MATTER OF THE TRICO ELECTRIC (COOPERATIVE, INC.'S APPLICATION FOR APPROVAL OF A NET METERING TARRIFF. (COOPERATIVE)

DOCKET NO. E-01461A-09-0450

**NOTICE OF FILING** 

Intervenor hereby files the documents pertaining to TRICO'S Net Metering Tariff as noted below.

RESPECTFULLY SUBMITTED this 30<sup>th</sup> day of November, 2010.

MECEIVED

James M. Arkoosh

Intervenor

65227 E. Emerald Ridge Dr. Tucson, Arizona 85739

ARIZONA CORP. CGMM 400 W CONGRESS STE 218 TUCSON AZ 8570°

#### **Enclosures:**

A1 – A3

TRICO's reply to Intervenor's Data Request
TRICO's reply to Intervenor's Data Request
C1

Prior Comments filed by Solar Installer dated February 23, 2010
Manufacturer's data collection information for Itron Meters



Original and 13 copies of the foregoing Filed this 30<sup>th</sup> day of November, 2010 with:

Docket Control Arizona Corporation Commission 400 West Congress Tucson AZ 85701-1347

Copy of the foregoing mailed This 30<sup>th</sup> day of November, 2010 to:

Jane L. Rodda, Administrative Judge Arizona Corporation Commission 400 Wet Congress street Tucson AZ 85201

Janice M. Alward, Esq. Chief Counsel, Legal Division Arizona Corporation Commission 1200 West Washington Phoenix AZ 85007

Ed Nitido TRICO Electric Cooperative, Inc. 8600 West Tangerine Road P.O. Box 930 Marana AZ 85643

Michael W. Patten Jason D. Gellman One Arizona Center 400 East Van Buren St., Suite 800 Phoenix AZ 85004

Βv

ames M. Arkoosh

# TRICO ELECTRIC COOPERATIVE, INC.'s RESPONSES TO MR. ARKOOSH DATA REQUEST DOCKET NO. E-01461A-09-0450 SEPTEMBER 29, 2010

**QUESTION 1:** 

What is the total amount of Net Metering Administration Charges TRICO has

charged and collected in the month of August 2010?

**RESPONSE:** 

The total amount of Net Metering Tariff Administration Charges collected for

August 2010 was \$653.01.

RESPONDENT:

Karen Cathers, Chief Operating Officer, Trico Electric Cooperative

# TRICO ELECTRIC COOPERATIVE, INC.'s RESPONSES TO MR. ARKOOSH DATA REQUEST DOCKET NO. E-01461A-09-0450 SEPTEMBER 29, 2010

#### **QUESTION 2:**

In TRICO's original application for Net Metering Tariff it stated under the administrative charge heading, "In order to determine accurate billing and usage, Net Metering customers will need to have interval meter data available (minimum data collection of every half hour)". Would you describe in detail how monthly net metering information is currently collected? Please include

- a) Equipment used
- b) Information gathered
- c) Intervals of collection
- d) Communication method
- e) Intervals of communication
- f) Type of communication

#### RESPONSE:

- a) Equipment used Itron CENTRON watt hour meter type C1SL has an on board Smart Synch GPRS communications module that is integrated into the meter.
- b) Information gathered bi-directional energy usage data for a standard residential net metering customer.
- c) Intervals of collection the meter collects data in 15 minute intervals.
- d) Communications method The Itron CENTRON meter uses the GSM/GPRS public wireless platform.
- e) Intervals of communication data from each meter is automatically sent to a Trico Itron MV90 Meter Data Management server each day. The data is also automatically sent to the Trico internal web page server that can provide usage information and load profile graphs at the request of the customer.
- f) Type of communication The CENTRON GPRS meter communicates with a server running SmartSynch's Transaction Management System (TMS) over secure public wireless networks and complies with ANSI C12.19 protocols for data storage and transmission. Meters are capable of two way communications. Designated Trico personnel can access meter data using TMS.

RESPONDENT: Karen Cathers, Chief Operating Officer, Trico Electric Cooperative

# TRICO ELECTRIC COOPERATIVE, INC.'s RESPONSES TO MR. ARKOOSH DATA REQUEST DOCKET NO. E-01461A-09-0450 SEPTEMBER 29, 2010

**QUESTION 3:** 

For standard customers, please indicate in detail the answers to the same six (6) questions as in question #2 above.

#### RESPONSE:

- a) Equipment used Itron CENTRON type C1S and the Landis and Gyr Focus type ALF watt hour meters.
- b) Information gathered single direction daily energy and demand usage data for a standard residential customer.
- c) Intervals of collection daily energy (kwh) and demand (kW) data.
- d) Communications method Power line carrier from the meter to a designated substation and automatically downloaded to Hunt Technologies server residing at Trico's office. Meters automatically communicate with the Hunt Technologies Command Center server. The readings are then automatically imported from this server into our National Information Solutions Cooperative (NISC) server.
- e) Intervals of communication daily.
- f) Type of communication The Itron CENTRON C1S and the Landis and Gyr Focus ALF meters use an on board Hunt Technologies power line carrier communication module that is integrated into the meter.

RESPONDENT: Karen Cathers, Chief Operating Officer, Trico Electric Cooperative

# TRICO ELECTRIC COOPERATIVE, INC.'s RESPONSES TO MR. ARKOOSH DATA REQUEST DOCKET NO. E-01461A-09-0450 NOVEMBER 3, 2010

**QUESTION 1:** 

The total number of Registered Net Metering customers in SaddleBrooke HOA

#1 and #2.

**RESPONSE:** 

Trico currently has 75 net metering member/customers in its cycle one billing,

which includes the areas of Saddlebrooke #1 and #2, as well as, those in Eagle

Crest and the surrounding areas.

RESPONDENT:

Karen Cathers, Chief Operating Officer, Trico Electric Cooperative, Inc.

# TRICO ELECTRIC COOPERATIVE, INC.'s RESPONSES TO MR. ARKOOSH DATA REQUEST DOCKET NO. E-01461A-09-0450 NOVEMBER 3, 2010

QUESTION 2: The total number of Registered Net Metering customers in Catalina and within a

5 miles radius. (As an alternative all net metering customers in zip code 85739

would be helpful. Please note if Saddlebrooke is included in this number.)

**RESPONSE:** Trico has almost no member/customers in the Catalina as this is for the most

part Tucson Electric Power Company (TEP) service area.

**RESPONDENT:** Karen Cathers, Chief Operating Officer, Trico Electric Cooperative, Inc.



## ORIGINAL

#### Before the Arizona Corporation Commission

February 22<sup>nd</sup>, 2010

#### Commissioners

Kristen K. Mayes, Chairman Gary Pierce Paul Newman Sandra D. Kennedy Bob Stump

Comments on the APPLICATION FOR REHI

Docket No. E-01461A-09-0450

Decision No. 71462

Submitted by: Kevin Koch, President Technicians For Sustainability, LLC 612 N. 7th Ave. Tucson, AZ, 85705

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FEB 2 2 2010

ARIZONA CORP. COMM CONGRESS STE 218 TUCSON AZ 8570

Arizona Corporation Commission DOCKETED

FEB 23 2010

DOCKETED BY

This document is filed in support of the application for Rehearing filed on February 3, 2010.

We feel that deeper consideration should be given to the matter of a monthly charge for metering electricity for homes with solar systems. Although the requirements of the Trico net metering tariff are appropriate for customers who wish to have Time Of Use (TOU) net metering, it is unnecessary and onerous for non-TOU customers. The majority of the Trico customers we have worked with do not have TOU metering, nor would it be advantageous for them with a solar electric system. Without TOU metering, there is no need to collect anything more than monthly readings. TEP does not require such meters, and does not have a charge for reading the meters of customers with solar systems.

Although this will not have a big impact on the cost of large systems, customers with modest electrical usage and small systems will lose a significant portion of their return on investment to this unnecessary monthly metering charge. In keeping with your history of strong advocacy and support for distributed generation, we hope that you will reconsider this aspect of the TRICO net metering tariff.

Based on the discussion above, we believe the proposed TRICO monthly Administrative Fee for Net Metering data collection and communication is not needed or supported by TRICO and fails to satisfy the Rules under R14-2-2305.

Sincerely

Kevin Koch

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#### Collect: Meter Data Collection Technology

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From radio-based endpoints to handhelds, mobile collection systems to fixed networks, we offer a comprehensive meter data collection portfolio. Highly scalable, our proven hardware and software products let energy and water utilities choose an integrated, open-architecture approach that specifically suits their automated meter reading needs.

#### Radio-Based Endpoints

Our endpoints serve as the data sending device for Itron's fully integrated portfolio of radio-based data collection solutions. Exceptionally rugged and durable, our electricity, gas and water endpoints are capable of withstanding some of the harshest environments, from extreme temperature variations to wet environments. The gas and water endpoints also feature industryleading battery performance.

#### Handhelds

For utilities looking to move away from conventional meter reading, our rugged, portable, radioequipped handhelds are an easy-to-use and affordable automatic meter reading (AMR) solution, allowing field workforces to capture, store and manage meter reads from any combination of electricity, gas and water meters.

#### Fixed Networks

Itron's extensive offering of fixed network AMR and AMI solutions leads to major gains in everything from operational efficiency and customer service to revenue assurance. Electric, gas and water utilities can use Itron's highly scalable fixed networks to begin advanced data collection with whatever size deployment their enterprise needs today, and grow their system in the future as the enterprise and business needs expand.

#### Data Collection Software

Itron provides automated meter data collection software to meet specific collection and management objectives in the most cost-effective and reliable manner across all customer segments and in all service environments. Rather than a one-size-fits-all technology, Itron's integrated, open-architecture approach to meter data collection provides our customers with unrivaled scalability, flexibility, ease of integration and cost optimization.

#### Workforce Management

Our mobile workforce management products combine the power of digital communications with the Internet and mobile workforce to transform field service operations. The technology streamlines a utility's daily operations in the field. It is easy-to-use and flexible, allowing utilities to maximize their field service representatives by using defined work flows that support daily work assignments.

TRICO ELECTRIC COOPERATIVE, INC **PO BOX 930 MARANA AZ 85653-0930** 

Questions and Concerns call: U
Office hours: 8:00 AM - 4:30 PM Monday - Friday
Phone: **520-744-2944** Toll Free: 1-866-337-2052 Office Add: 8600 W. Tangerine Road Marana, AZ 85658 Website Address: <u>www.trico.coop</u>

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DEBRA J ARKONSH

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Billing Date 11/05/2010 **Billing Summary** Amount Due Last Billing 19.80 Payment 19.80 CR Balance Forward 0.00 **Current Charges** 19.80 Total Amount Due 11/22/2010 19.80

Messages

Account 2

Happy Thanksgiving!

Page 1 of 1

REGULAR

Account:	Service	Addre	ss: (			Rate: RS1 Map Location:	
Company Compan	Meter Read	ing Del	alls		•	Detail of Charges	April 14
Meter: BEI	K10356	Mult:	1	CONS		Fixed Monthly Charge Residential	15.00
Current Reading	11/01/10				6,712	Net Metering Monthly Charge	3.38
Previous Reading	10/01/10				6,471	Sales Tax	1.42
Delivered to	to Member				241		
						Total	19.80
Meter: BE	K10356	Mult:	1	GEN			
Current Reading	11/01/10				7,702	RESIDENTIAL	
Previous Reading	10/01/10				7,034	THIS BILL WILL BE PAID BY BANK DRAFT	
	from Member				-668		
Billed KWH Usag	ne				0		
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BANKED Curren	it				427		
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Return this portion with your payment.

Account Name: DEBRA J ARKOOSH

Account Number:

We accept Discover, Visa, MasterCard

DISC VER

VISA



For more information, visit our website or office.

PLEASE INDICATE CHANGE OF ADDRESS PHONE NUMBER HERE.

Address/Box Number City State Zip Phone Number Other Phone

**Drafted Amount** 19.80 **Draft Date** 11/22/2010

See Back of Bill for Other Important Information.

Your payment and any returned items may be processed electronically.

TRICO ELECTRIC COOPERATIVE **REMITTANCE CENTER** PO BOX 80072 PRESCOTT AZ 86304-8072

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## BEFORE THE ARIZONA CORPORATION COMMISSION RECEIVED

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4	SANDRA D. KENNEDY BOB STUMP		COMMISSION T CONTROL
5			
6	IN THE MATTER OF THE TRICO ELE COOPERATIVE, INC.'S APPLICATION	,	DOCKET NO. E-01461A-09-0450
7	APPROVAL OF A NET METERING TA	ARIFF. )	APPLICATION UNDER A.R.S. § 40-252 TO REOPEN
8		Ó	DOCKET TO CONSIDER POSSIBLE AMENDMENT OF
9		)	<b>DECISION NO. 71462</b>
10		ĺ	

Trico Electric Cooperative, Inc. ("Trico") hereby requests the Arizona Corporation Commission to reopen this docket in order to consider whether to alter or amend Decision No. 71462 (January 26, 2010), which approved Trico's Net Metering Tariff. Trico proposes that the docket be reopened for the limited purpose of: (i) formally including in the record the data request responses that Trico provided to Commission Staff and Intervenor Arkoosh in this docket and (ii) considering the possible alteration or amendment of Decision No. 71462 with respect to the narrow issue set forth in the Application for Rehearing filed in this docket on February 4, 2010. In support of this Application, Trico states as follows:

- 1. On September 18, 2009, Trico filed with the Commission an Application for Approval of its Net Metering Tariff.
- 2. On October 28, 2009, the Commission granted intervention in this docket to James Arkoosh, a Trico Member ("Arkoosh").
- 3. As part of the Commission's consideration of Trico's application, Trico provided responses to data requests from Commission Utilities Division Staff ("Commission Staff"). Copies of the data request responses that Trico provided to Commission Staff in this docket are attached as Exhibit A.



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4. Trico also responded to data requests propounded by Arkoosh and provided copies of those responses to Commission Staff. Copies of the responses to the Arkoosh data requests that were provided to Commission Staff are attached as Exhibit B.

- 5. Consistent with the practice in net metering tariff proceedings for other Arizona electric utilities, the data responses were provided directly to Commission Staff and not formally filed in the docket.
- 6. Trico's responses to the data requests in this docket were reviewed and referenced by Staff in its Staff Report recommending approval of Trico's net metering tariff and in Decision No. 71462. Arkoosh also referenced data request responses in his filings in the docket and during his comments at the January 13, 2010 Commission open meeting where Trico's Net Metering Tariff was considered and approved.
- 7. The Commission voted to approve Trico's Net Metering Tariff at the January 13, 2010 open meeting and Decision No. 71462 approving the Net Metering Tariff was docketed on January 26, 2010.
- 8. On February 4, 2010, Arkoosh filed an Application for Rehearing of Decision No. 71426. The Application for Rehearing raised the narrow issue that the Administrative Charge approved by the Commission was not supported by information required by A.A.C. R14-2-2305. However, the data request responses that were provided to Commission Staff and Arkoosh fully supported the Administrative Charge. The Application for Rehearing was denied by operation of law on February 23, 2010.
- 9. On March 18, 2010, Arkoosh filed a Notice of Appeal with the Arizona Court of Appeals (2CA-CC-2010-0001) based on the issue raised in the Application for Rehearing. Including the attached data request responses as part of the formal record will ensure that all relevant information in support of Decision No. 71426 is available in the Commission's docket.

# ROSHKA DEWULF & PATTEN, PLC ONE ARIZONA CENTER 400 EAST VAN BUREN STREET - SUITE 800 PHOENIX, ARIZONA 85004

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#### **Relief Requested**

Pursuant to A.R.S. 40-252, Trico moves to reopen the docket for the limited purpose of: (i) including in the record of this docket the attached materials previously provided to Commission Staff and Intervenor Arkoosh and (ii) determining whether, in light of those materials, Decision No. 71462 should be altered or amended based on the narrow issue raised in the Application for Rehearing filed on February 4, 2010.

RESPECTFULLY SUBMITTED this 8<sup>th</sup> day of April, 2010.

ROSHKA DEWULF & PATTEN, PLC

By

Michael W. Patten
One Arizona Center
400 East Van Buren Street, Suite 800
Phoenix, Arizona 85004

Attorneys for Trico Electric Cooperative, Inc.

Original and 13 copies of the foregoing filed this 8<sup>th</sup> day of April, 2010 with:

Docket Control Arizona Corporation Commission 1200 West Washington Street Phoenix, Arizona 85007

Copy of the foregoing hand-delivered/mailed this 8<sup>th</sup> day of April, 2010 to:

Lyn Farmer, Esq. Chief Administrative Law Judge Hearing Division Arizona Corporation Commission 1200 West Washington Phoenix, Arizona 85007

Janice M. Alward, Esq. Chief Counsel, Legal Division Arizona Corporation Commission 1200 West Washington Phoenix, Arizona 85007

ROSHKA DEWULF & PATTEN, PLC	ONE ARIZONA CENTER	400 EAST VAN BUREN STREET - SUITE 800	PHOENIX, ARIZONA 85004	TELEPHONE NO 602-256-6100	FACSIMILE 602-256-6800	
æ		400				

Steve Olea
Director, Utilities Division
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

By May Sprolits

# **EXHIBIT**

**"**A"

From:

Karen Cathers [kcathers@trico.coop]

Sent:

Monday, October 05, 2009 1:30 PM

To:

'JPasquinelli@azcc.gov'

Cc:

'Marsha Regrutto'; Vincent Nitido (vnitido@trico.coop); 'Caroline Gardiner'

Subject:

RE: Trico's Net Metering Tariff (09-0450)

Attachments: AEPCO2008\_2009 Energy Rates.xis

Jeff.

In response to your question below, the annual average avoided cost is defined in the Trico Net Metering Tariff as the average annual wholesale fuel and energy costs per kWh charged by the cooperative's wholesale power supplier, Arizona Electric Power Cooperative, Inc. (AEPCO). This definition reflects the incremental costs to the cooperative that the cooperative would purchase from AEPCO for energy, but for the purchase from the Net Metering Facility output. The annual average avoided cost per kWh is the price paid by Trico to the net metering customer for any excess energy credit at the end of the calendar year true up period (May 1 through April 30).

The AEPCO energy price is set by a Commission approved rate tariff (base rate) plus a Commission approved fuel and purchase power cost adjustor (FPPCA), which AEPCO modifies through a semi-annual filing required by the Commission that results in new FPPCA rates each year on April 1 and October 1. Attached find a spreadsheet summarizing the AEPCO actual energy rates charged to Trico for the period of May 2008 through April 2009, which as an example Trico would use for the purpose of determining the billing credit for the balance of any excess at the end of this example annual period (results in an annual average avoided cost of \$0.04205/kWh).

Please let me know if this does not fully respond to your question.

Thanks, Karen

Trico Electric Cooperative, Inc. (520) 744-2944 ext1335

From: Jeffrey Pasquinelli [mailto:JPasquinelli@azcc.gov]

Sent: Thursday, October 01, 2009 11:07 AM

To: Marsha Regrutto

Subject: RE: Trico's Net Metering Tariff (09-0450)

Please consider this as informal discovery. I am not sure you are the correct person, Marsha, but please forward if necessary.

Thank You,

Jeff Pasquinelli ACC Staff 602-542-4382

The Net Metering Rules sate:

R14-2-2306. Billing for Net Metering

F. Once each calendar year the Electric Utility shall issue a check or billing credit to the Net Metering Customer for the balance of any credit due in excess of amounts owed by the Customer to the Electric Utility. The payment for any remaining credits shall be at the Electric Utility's Avoided Cost. That Avoided Cost shall be clearly identified in the Electric Utility's Net Metering tariff.

Trico's tariff application does not state the avoided cost rate as required by the final sentence in this paragraph.

Please supply Staff with the rate Trico would use in payment for any remaining credits.

		Arizona Corporat	ion Commission	
	In	formal Discovery Request t	o Trico Electric Cooperative	
		Docket No. E-0	1461A-09-0450	
200	08-2009 H	istorical Arizona Ele	ectric Power Coopera	ative Rates
			·······	W/A
Month	Year	Base Energy Rate	Fuel Adjustor (FPPCA)	Total Energy Rate
		\$/kWh	\$/kWh	\$/kWh
May	2008	0.02073	0.01272	0.03345
Jun	2008	0.02073	0.01272	0.03345
Jul	2008	0.02073	0.01476	0.03549
Aug	2008	0.02073	0.01476	0.03549
Sep	2008	0.02073	0.01476	0.03549
Oct	2008	0.02073	0.02674	0.04747
Nov	2008	0.02073	0.02674	0.04747
Dec	2008	0.02073	0.02674	0.04747
Jan	2009	0.02073	0.02674	0.04747
Feb	2009	0.02073	0.02674	0.04747
Mar	2009	0.02073	0.02674	0.04747
Apr	2009	0.02073	0.02563	0.04636
Average Annu	al	0.02073	0.02132	0.04205

From:

Karen Cathers [kcathers@trico.coop]

Sent:

Wednesday, October 14, 2009 8:09 AM

To:

'JPasquinelli@azcc.gov'

Cc:

'Hedrick, David'; 'Marsha Regrutto'; 'Caroline Gardiner'; 'Vin Nitido (vnitido@trico.coop)'; '!

Janice Rast'

Subject:

Trico's Net Metering Tariff (09-0450)

Attachments: Schedule DH1.pdf

Jeff.

In response to your informal discovery below, the administrative charge included in the Trico proposed net metering tariff of \$4.38 per month is in addition to the charges as billed in accordance with rates and charges under the standard rate schedule. The administrative charge recovers certain incremental costs associated with the additional data requirements required to ensure accurate billing of the customer as well as to determine the cost allocations between Trico, AEPCO and the customer in providing net metering service. In order to determine the appropriate billing for the net metering customer Trico requires at a minimum by-directional 30-minute interval data. The additional monthly cost to collect this data and process it corresponds to \$4.38.

Schedule DH-1 attached provides the calculation of the additional cost and components. The total cost for interval data retrieval of \$5.00 per month corresponds directly to the cell phone charge that Trico receives to download the monthly 30-minute interval data from each meter (charge is based on total data transfer not on the number of times the meter is called). The total cost for interval data reduction/storage of \$1 is to provide a representative portion of the cost for Trico to store, check and reduce the data to monthly total values for transfer to the Trico billing software. The \$6 amount is reduced by \$1.62 which is the meter reading cost included in Trico's standard rate tariffs. The result is an incremental additional monthly meter reading cost for the net metering customer of \$4.38.

Please let me know if you need additional information.

Thank you, Karen

From: Jeffrey Pasquinelli [mailto:JPasquinelli@azcc.gov]

Sent: Wednesday, October 07, 2009 1:08 PM

To: Karen Cathers

**Subject:** RE: Trico's Net Metering Tariff (09-0450)

Please consider this as informal discovery.

Thank You,

Jeff Pasquinelli ACC Staff 602-542-4382

Trico proposes a monthly data cost rate for net metering customers of \$4.38.

Please provide the complete cost support for this charge.
message has been scanned to detect malicious content. If you experience problems, please e-mail
postmaster@azcc.gov ====================================

#### TRICO ELECTRIC COOPERATIVE, INC

## DEVELOPMENT OF MONTHLY ADMINISTRATIVE CHARGE FOR NET METERING TARIFF

Total Cost for Interval Data Retrieval	\$ 5.00
Total Cost for Interval Data Reduction/Storage	\$ 1.00
Total Meter Reading Cost for Net Metered Customer	\$ 6.00
Meter Reading Cost Recovered in Standard Rate	\$ 1.62
Additional Meter Reading Cost	\$ 4.38

From: Karen Cathers [kcathers@trico.coop]

Sent: Wednesday, October 14, 2009 8:44 AM

To: 'Jeffrey Pasquinelli'

Cc: 'Hedrick, David'; 'Marsha Regrutto'; 'Caroline Gardiner'; 'Vin Nitido (vnitido@trico.coop)'; '! Janice

Rast'

Subject: RE: Trico's Net Metering Tariff (09-0450)

Jeff,

In the Trico Net Metering Tariff definitions section, the Calendar Year is defined as May 1 through April 30, for the purpose of determining the billing credit for the balance of any credit due in excess of the amounts owed by the customers to the Cooperative.

Although the net metering tariff allows for the carryover of excess energy produced to be used in subsequent billing months, the Calendar Year true-up limits that carry over for full credit at the retail rate to a twelve month period. The definition of the Calendar Year twelve months ending April 30 will allow Trico to appropriately compensate the customer for excess energy generated in the off-peak season at avoided cost. Preventing the carry over of excess energy produced in the off-peak season to be used in the on-peak summer season will reduce the negative financial impact on the cooperative, as well as, provide an incentive for net metering customers to size their generation to more closely fit their actual load requirements.

The last billing month would coincide with April of each year and would include the period of May 1 through April 30. Trico would expect to issue the check for any net metering credit in June of each year such that we can include any credits through April 30 from the May bills. Trico did not plan to negotiate the timing of the credit payment with the net metering customer.

Please let me know if you need any additional information.

Thank you, Karen

From: Jeffrey Pasquinelli [mailto:JPasquinelli@azcc.gov]

Sent: Thursday, October 08, 2009 10:55 AM

To: Karen Cathers

**Subject:** RE: Trico's Net Metering Tariff (09-0450)

Please consider this another Staff informal discovery request.

Thank You.

Jeff Pasquinelli

**ACC Staff** 

602-542-4382

With respect to payment for excess generation, please specify the month of the last billing period.

The proposed tariff under Billing, Paragraph C indicates that
"for the last billing period of each calendar yearthe Cooperative shall issue a check
check
In what specific month would this reconciliation take place?
Could the timing of the payment be negotiated with the net metering customer?
message has been scanned to detect malicious content. If you experience problems, please e-mail
postmaster@azcc.gov ====================================

From: Karen Cathers [kcathers@trico.coop]

Sent: Tuesday, October 20, 2009 9:40 AM

To: 'Jeffrey Pasquinelli'

Cc: 'Hedrick, David'; 'Caroline Gardiner'; 'Marsha Regrutto'; Vincent Nitido (vnitido@trico.coop)

Subject: RE: Trico's Net Metering Tariff (09-0450)

Jeff.

In response to your informal discovery request below, the standard Trico residential meter currently has a price of approximately \$134. This meter is not able to provide the bi-directional interval data necessary to bill a net metering customer. The standard Trico meter capable of providing the data for net metering currently runs about \$350.

The Cooperative net metering tariff includes a one-time up-front payment to Trico to cover any incremental cost of the meter. The pricing for the smarter meters has come down over the last few years and we hope that this trend will continue. Some existing customers already have the smarter meter capable of providing the data for net metering (e.g. time-of-use customers and cogeneration customers). Trico will only charge the incremental meter cost for those customers that require a meter upgrade for net metering service and will base this incremental cost on the actual meter price.

Please let me know if you need any additional information.

Thanks, Karen

Trico Electric Cooperative, Inc. (520) 744-2944 ext 1335

From: Jeffrey Pasquinelli [mailto:JPasquinelli@azcc.gov]

Sent: Monday, October 19, 2009 11:38 AM

To: Karen Cathers

**Subject:** Trico's Net Metering Tariff (09-0450)

Please consider this another Staff informal discovery request concerning your proposed Net Metering tariff. Please note that I must submit my report by October 26 for this issue to be on the Commission's November open meeting (Nov 19 and 20).

Thank You, Jeff Pasquinelli ACC Staff 602-542-4382

Ttico's proposed tariff states " the incremental metering costs for bimetering will be incurred by the customer"	directiona
Please state the amount of these incremental costs to be charged to Necustomers, and include support for such coats.	: Metering
message has been scanned to detect malicious content. If you experience problems, pleat postmaster@azcc.gov ====================================	

From: Sent:

Karen Cathers [kcathers@trico.coop] Monday, October 26, 2009 2:47 PM

To:

'Jeffrey Pasquinelli'

Cc:

'Vin Nitido'; 'Hedrick, David'; Caroline Gardiner (cgardiner@trico.coop); 'Marsha Regrutto'

Subject:

**RE: More Questions** 

Attachments:

Trico Net Metering Tariff Informal Data Request Response E-01461A-09-0450 102609.doc;

Schedule DH1.pdf





Trico Net Metering Schedule DH1.pdf Tariff Info... (54 KB)

Jeff,

After reviewing our data and discussing with our rate consultant, we do not have any substantive new information regarding your questions. However, in the attached document Trico has tried to answer your request in a more formal manner with some additional clarification that hopefully you will find helpful.

Please let me know if this does not provide what you needed.

Thank you, Karen

Trico Electric Cooperative, Inc. (520) 744-2944 ext 1335

----Original Message----

From: Jeffrey Pasquinelli [mailto:JPasquinelli@azcc.gov]

Sent: Wednesday, October 21, 2009 7:17 AM

To: Karen Cathers

Subject: FW: More Questions

Please consider this another Staff discovery request concerning your Cooperative. Please note that I must submit my report by October 28 for this issue to be on the Commission's November open meeting (Nov 19 and 20).

I realize you provided something on the \$4.38 previously; this is more formal and asks For additional information.

Thank You,

Jeff Pasquinelli

ACC Staff

602-542-4382

The Net Metering rules state:

R14-2-2305. New or Additional Charges Net Metering charges shall be assessed on a nondiscriminatory basis. Any proposed charge that would increase a Net Metering Customer's costs beyond those of other customers with similar load characteristics or customers in the same rate class that the Net Metering Customer would qualify for if not participating in Net Metering shall be filed by the Electric Utility with the Commission for consideration and approval. The charges shall be fully supported with cost of service studies. The Electric Utility shall have the burden of proof on any proposed charge.

- a) Trico would install a bi-directional meter with Incremental metering costs to be incurred by the customer.
- b) Trico is proposing a \$4.38 / month administrative charge for additional meter and billing costs associated with Net Metering Customers.

These charges would be considered to be new or additional as defined by the above-quoted paragraph. Please provide full cost support for these charges as required by the Rules.

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# RESPONSE OF TRICO ELECTRIC COOPERATIVE TO ARIZONA CORPORATION COMMISSION STAFF'S INFORMAL SET OF DATA REQUESTS

DOCKET NO. E-01461A-09-0450 October 26, 2009

#### Question:

The Net Metering rules state:

R14-2-2305. New or Additional Charges Net Metering charges shall be assessed on a non discriminatory basis. Any proposed charge that would increase a Net Metering Customer's costs beyond those of other customers with similar load characteristics or customers in the same rate class that the Net Metering Customer would qualify for if not participating in Net Metering shall be filed by the Electric Utility with the Commission for consideration and approval. The charges shall be fully supported with cost of service studies. The Electric Utility shall have the burden of proof on any proposed charge.

- a) Trico would install a bi-directional meter with Incremental metering costs to be incurred by the customer.
- b) Trico is proposing a \$4.38 / month administrative charge for additional meter and billing costs associated with Net Metering Customers.

These charges would be considered to be new or additional as defined by the above-quoted paragraph. Please provide full cost support for these charges as required by the Rules.

#### Response:

a) The Cooperative net metering tariff includes a one-time up-front payment to Trico from the customer to cover any incremental cost of the meter if they require an upgraded meter due solely for Trico to provide net metering service. The pricing for the smarter meters has come down over the last few years and we hope that this trend will continue. Some existing customers already have the smarter meter capable of providing the data for net metering (e.g. certain time-of-use customers and cogeneration customers). Trico will only charge the incremental meter cost for those customers that require a meter upgrade for net metering service and will base this incremental cost on the actual meter price.

The standard Trico residential meter currently has a price of approximately \$134. This meter is not able to provide the bidirectional interval data necessary to bill a net metering customer. The standard Trico meter capable of providing the data for net metering currently runs about \$350.

# RESPONSE OF TRICO ELECTRIC COOPERATIVE TO ARIZONA CORPORATION COMMISSION STAFF'S INFORMAL SET OF DATA REQUESTS

DOCKET NO. E-01461A-09-0450 October 26, 2009

b) The administrative charge included in the Trico proposed net metering tariff of \$4.38 per month is in addition to the charges as billed in accordance with rates and charges under the standard rate schedule. The administrative charge recovers certain incremental costs associated with the additional data requirements required to ensure accurate billing of the net metered customer as well as to determine the cost allocations between Trico, AEPCO and the customer in providing net metering service. In order to determine the appropriate billing for the net metering customer Trico requires at a minimum by-directional 30-minute interval data. The additional monthly cost to collect this data and process it corresponds to \$4.38.

Schedule DH-1 attached provides the calculation of the additional cost and components. The total cost for interval data retrieval of \$5.00 per month corresponds directly to the cell phone charge that Trico receives to download the monthly 30-minute interval data from each meter (charge is based on total data transfer not on the number of times the meter is called). The total cost for interval data reduction/storage of \$1 is to provide a representative portion of the cost for Trico to store, check and reduce the data to monthly total values for transfer to the Trico billing software. The \$6 amount is reduced by \$1.62 which is the meter reading cost included in Trico's standard rate tariffs. The result is an incremental additional monthly meter reading cost for the net metering customer of \$4.38.

The charges described in a) and b) are based on the difference between the cost to provide service to a standard customer versus the increased cost for a net metering customer. The standard costs included in the approved tariffs were based on the Trico cost of service study approved by the commission in Trico's last rate case (Decision No. 71230). As shown above, the increased cost to provide services to the net metering customer are based on the actual estimate of costs. The information provides a simple incremental cost of service analysis.

Prepared By: Karen Cathers, Manager of Contracts and Regulatory Affairs

## TRICO ELECTRIC COOPERATIVE, INC

# DEVELOPMENT OF MONTHLY ADMINISTRATIVE CHARGE FOR NET METERING TARIFF

Total Cost for Interval Data Retrieval	\$ 5.00
Total Cost for Interval Data Reduction/Storage	\$ 1.00
Total Meter Reading Cost for Net Metered Customer	\$ 6.00
Meter Reading Cost Recovered in Standard Rate	\$ 1.62
Additional Meter Reading Cost	\$ 4.38

#### **Karen Cathers**

From:

Karen Cathers [kcathers@trico.coop]

Sent:

Wednesday, December 02, 2009 4:55 PM

To:

'Jeffrey Pasquinelli'

Cc:

'Hedrick, David'; 'Caroline Gardiner'; Vincent Nitido (vnitido@trico.coop)

Subject:

**RE: Net Metering** 

Attachments: AEPCO2008\_2009 Energy Rates.xls

Jeff.

Trico's most recent average annual wholesale fuel and energy cost charged from AEPCO (for the period of May 2008 through April 2009) is \$0.04205/kWh, as detailed in the attached spreadsheet. AEPCO modifies its Fuel and Purchase Power Cost Adjustor (FPPCA) through a semi-annual filing required by the Commission that results in new FPPCA rates each year on April 1 and October 1. Thus, if Trico has specified a current avoided cost in our net metering tariff we may need to either re-file each year with the updated avoided cost number or leave it based on the avoided cost of the year we filed the tariff, which may not reflect Trico's actual avoided cost in future periods.

Please let me know if you need additional information.

Thanks, Karen

From: Jeffrey Pasquinelli [mailto:JPasquinelli@azcc.gov]

Sent: Wednesday, December 02, 2009 8:52 AM

To: Karen Cathers Subject: Net Metering

Trico defines its avoided costs as

the average annual wholesale fuel and energy costs per kwh energy purchased from the Cooperative's wholesale power supplier during the calendar

year.

This is OK, but the Rules say to specify the actual avoided cost rates that will be paid.

Please send me the current avoided cost rates that Trico would pay a net metering customer. This will have to be in the Open Meeting memo and order for Commission approval. December Open Meeting is Dec 15, so please reply soon.

Thanks,

Jeff Pasquinelli ACC Staff 602-542-4382

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<del></del>		Arizona Corporat	ion Commission	
	In		to Trico Electric Cooperative	A STATE OF S
		Docket No. E-0		
		Docket No. L-o	14017-09-0430	
2	008-2009 H	istorical Arizona Ele	ectric Power Coopera	ative Rates
Month	Year	Base Energy Rate	Fuel Adjustor (FPPCA)	Total Energy Rate
		\$/kWh	\$/kWh	\$/kWh
			No. of the Control of	
Мау	2008	0.02073	0.01272	0.03345
Jun	2008	0.02073	0.01272	0.03345
Jul	2008	0.02073	0.01476	0.03549
Aug	2008	0.02073	0.01476	0.03549
Sep	2008	0.02073	0.01476	0.03549
Oct	2008	0.02073	0.02674	0.04747
Nov	2008	0.02073	0.02674	0.04747
Dec	2008	0.02073	0.02674	0.04747
Jan	2009	0.02073	0.02674	0.04747
Feb	2009	0.02073	0.02674	0.04747
Mar	2009	0.02073	0.02674	0.04747
Apr	2009	0.02073	0.02563	0.04636
Average An	nual	0.02073	0.02132	0.04205

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#### Karen Cathers

From:

Karen Cathers [kcathers@trico.coop]

Sent:

Friday, February 12, 2010 11:44 AM

To:

'Jeffrey Pasquinelli'

Cc:

'Vincent Nitido'; 'Janice Rast'

Subject:

Additional Information Related to Trico Net Metering Administrative Charge

Attachments: ssi services agr\_20100210133834.pdf

Jeff.

The intent of this email is to provide some additional information related to the Trico Net Metering Tariff Administrative Charge as approved by the Commission in Decision No. 71462 of \$3.38 per month.

Trico provides for Net Metering by installing a "SmartSynch" meter which is capable of measuring energy flow both to the customer and from the customer (by-directional). Trico's standard meter used for residential and residential time-of-use is not capable of by-directional metering. The data communication from each SmartSynch meter is accomplished through a cell phone service provided by SmartSynch, Inc. to Trico as part of a meter services agreement. Attached find the SmartSynch Services Agreement (Agreement), which includes the fees on the last page entitled "Exhibit B – Fee Schedule".

The fee schedule in the Agreement includes collecting by-directional data on a 15 minute interval and transferring that data each month to Trico via cell phone communication. SmartSynch has agreed to lower its charge from \$7 per month to \$5 per month for single phase by-directional 30 minute interval data. All the Trico customers who take service on the Trico Net Metering Tariff will have a SmartSynch meter installed, which will provide Trico the by-directional 30-minute interval data each month. Once we have customers on the Net Metering Tariff for a full billing cycle we should be able to provide you with the actual invoice from SmartSynch with a record of the \$5 per month charge for each meter.

The \$5 incremental charge is reduced by \$1.62 which is the meter reading cost included in Trico's standard rate tariffs. The result is an incremental additional monthly cost for the net metering customer of \$3.38. The Administrative Charge does not include any dollars associated with the incremental cost of the meter of approximately \$200 per meter.

Please let me know if you have questions or need additional information.

Thank you, Karen

Trico Electric Cooperative, Inc. (520) 744-2944 ext 1335

#### SSI SERVICES AGREEMENT

This SSI Services Agreement ("Agreement") is made and entered into by and between SmartSynch, Inc. ("SSI"), a Delaware corporation, and TRICO ("Company"), a ARIZ ON A corporation.

WHEREAS, SSI provides services in support of and related to its proprietary SmartMeter<sup>TM</sup> wireless data processing system;

WHEREAS, Company desires to receive SSI's services for use in connection with Company's Application (as defined in Exhibit A); and

WHEREAS, SSI desires to provide its services to Company for use in connection with the Application pursuant to the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the covenants and obligations contained herein, the parties agree as follows:

- 1. Definitions. All capitalized terms used herein shall have the meanings given to them in the terms and conditions set forth in Exhibit A attached hereto and incorporated herein by this reference, unless otherwise indicated.
- 2. Services. SSI agrees to provide to Company the Services, subject to and in accordance with the terms and conditions of this Agreement, including without limitation, the terms and conditions contained on Exhibit A.
- 3. Fees. In exchange for its receipt of the Services, Company agrees to pay SSI the fees and charges set forth in <u>Bxhibit B</u> ("<u>Fees Schedule</u>") attached hereto and incorporated herein by this reference.
- 4. Term. The term of this Agreement shall commence as of the date this Agreement is executed by SSI ("Effective Date") and shall continue for a period of two (2) year(s) thereafter ("Initial Term"). The Initial Term of this Agreement will automatically renew for additional, successive one (1) year terms (each a "Renewal Term") upon the expiration of the Initial Term and any Renewal Terms, unless either party notifies the other of its desire to terminate this Agreement no later than sixty (60) days prior to the expiration of the then current term. The Initial Term and all Renewal Terms, if any, shall collectively be known as the "Term" of this Agreement.
- 5. Notice. Any notice or other communication herein required or permitted to be given shall be in writing and may be personally served, delivered via certified mail return receipt requested, or delivered by a recognized overnight courier. Notice shall be deemed to have been received (a) on the date of delivery when delivered in person and signed for by the person to whom the notice is addressed, (b) on the date of delivery as indicated by the postal service when delivered by certified mail, or (c) on the date of delivery as indicated by the overnight courier when delivered by overnight courier service. Notices shall be delivered to the following persons and addresses, unless otherwise indicated in writing by the parties during the Term:

To SSI: SmartSynch, Inc.

4400 Old Canton Road

Suite 300

Jackson, MS 39211

Telephone: (601) 362-1780

Facsimile:

(601) 362-1787

Attention:

Stephen D. Johnston

Telephone:

To Company:

Facsimile:

Attention:

IN WITNESS WHEREOF, SSI and Company have executed this Agreement as of the Effective Date.

SMARTSYNCH, INC.

By: Title:

Date:

COMPANY:

BY: WILLIAM F. COOK Tille: TECHNICAL SERVICES

#### Exhibit A - Terms and Conditions

#### 1. Definitions.

- (a) Affiliate: As applied to any Person, any other Person directly or indirectly controlling, controlled by, or under common control with, that Person. For purposes of this definition, "control" (including with correlative meanings, the terms "controlling", "controlled by", and "under common control with"), as applied to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of that Person through the ownership of voting securities, by contract or otherwise.
- (b) Airtime Provider: The Person or Persons that provide and control the two-way wireless messaging system network which SSI uses to provide its Data Processing Services.
- (c) Application: The automation systems of Company, including but not limited to automated meter reading.
- (d) Confidential Information: business, marketing, sales, financial or technical information, including, without limitation, any information relating to present and future business operations or financial condition, and all other information of any kind which may reasonably be deemed confidential or proprietary, disclosed by one party to the other pursuant to this Agreement, including without limitation information which is designated or identified as "confidential," "proprietary" or in some other manner to indicate its confidential nature. The terms and conditions of this Agreement will be deemed Confidential Information of both parties. Notwithstanding the above, "Confidential Information" does not include information that (i) is or becomes generally known or available by publication, commercial use or otherwise through no fault of the receiving party; (ii) was known by the receiving party at the time of disclosure by the disclosing party as evidenced by competent written proof; (iii) is independently developed by the receiving party without use of the disclosing party's Confidential Information, reasonable proof of which can be demonstrated by the receiving party; or (iv) is lawfully obtained from a third Person who has the right to make such disclosure without restriction.
- (c) Customer: A customer of Company that is an end-user of the Application.

- '.(f) Data Processing Services: The collection, analysis and reporting of utility meter data provided by SSI.
- (g) Person: Any individual, company, corporation, firm, partnership, joint venture, association, organization or trust, in each case whether or not having a separate legal identity.
- (h) PIN: A unique, Transceiver specific, personal identification number or other form of identification number to be assigned by SSI in accordance with the provisions of Section 3(b) below.
- (i) Services: The services provided by SSI to Company pursuant to this Agreement including but not limited to Data Processing Services and Training Services.
- · (j) SSI Network; That portion of Airtime Provider's two-way wireless messaging system network, utilized by SSI to provide its Data Processing Services.
- (k) Training Services: Training programs provided by SSI to Company for instruction in use of the SmartMeter<sup>th</sup> system and related software.
- (I) Transceiver: Any fixed location wireless messaging unit owned or controlled by Company that SSI deems acceptable for use on the SSI Network in connection with the Application.

#### 2. Services - Conditions of Use.

- (a) SSI will provide the Services to Company for use only in connection with the Application. Any use of the Services by Company or Customers other than as permitted under this Agreement is expressly prohibited. SSI shall be permitted to provide the Services through its Affiliates.
- (b) SSI's provision of the Services to Company shall at all times be subject to:
- (i) the terms and conditions set forth in this Agreement;
- (ii) the availability of SSI Network; and

- (iii) SSI's or Airtime Provider's approval of the Application and its compatibility with the Services and the SSI Network.
- (c) Should Company's or a Customer's use of the Application adversely affect the SSI Network, any Transceiver, or the ability of SSI or Airtime Provider to provide their respective services in an efficient and timely manner, SSI shall have the right, without any liability to Company or its Customers, to discontinue the provision of Data Processing Services until such time as the problem is resolved to the satisfaction of SSI and Airtime Provider.
- (d) Company shall provide, at no cost to SSI, dedicated or dial-up access lines and trunks (i.e., no 800/888 access) to the SSI Network as may be necessary for data entry and retrieval by Company and/or its Customers. Neither SSI nor Airtime Provider shall have any obligation to provide or supply any such access lines and trunks to Company or its Customers.
- (e) This Agreement shall not constitute an exclusive arrangement between the parties, and, notwithstanding anything to the contrary herein, SSI expressly reserves the right, among other things, to promote, solicit, market and sell the Services, or any other data processing or information services and applications available by or through SSI and its Affiliates, directly or indirectly to other Persons.

#### 3. Transceivers.

- (a) All Transceivers utilized by SSI to provide the Data Processing Services shall comply with the terms and conditions of this Agreement and such other requirements as SSI may provide to Company in writing from time to time. Failure by Company to comply with SSI's policies, directives and procedures for activation may lead to delay in the activation of a Transceiver.
- (b) SSI shall assign a PIN to each Transceiver to be utilized by SSI to provide the Data Processing Services. All PINs assigned by SSI shall remain the property of SSI or Airtime Provider. SSI or Airtime Provider shall have the right to utilize PINs which are not utilized by Company, as well as PINs associated with deactivated Transceivers, as SSI or Airtime Provider may determine from time to time.
- 4. Activation Procedures. Transceivers will be activated for use on the SSI Network within seventy-

two (72) hours of SSI's receipt of Company's written request for activation.

5. Training Services. At Company's request, SSI will provide Training Services at times and locations mutually agreeable to the parties. Company shall bear all Company costs and expenses incurred by Company in receiving the Training Services. Company shall pay to SSI the Training Services fees as set forth in the Fees Schedule. Company shall reimburse SSI for all reasonable out-of-pocket travel and lodging expenses associated with such Training Services.

#### 6. Fees.

- (a) Company shall pay to SSI the fees and charges set forth in the Fees Schedule in exchange for the Services received by Company. The fees and charges reflected in the Fees Schedule are applicable only to Services provided in connection with the Application.
- (b) The fees and charges set forth in the Fees Schedule apply to Services provided by SSI in the geographic areas covered by the SSI Network as of the Effective Date, and as such geographic areas may be expanded from time to time in the normal course of SSI's business. SSI will cooperate with Company in conveying to Airtime Provider any requests by Company to expand the geographic areas covered by the SSI Network to include Company designated locations. Company acknowledges, however, that any expansion of the geographic areas covered by the SSI Network (i) will be subject to Airtime Provider's approval and timetable for expansion, and (ii) require Company's agreement to activate and maintain an agreed upon level of net additional Transceivers, to pay all or a portion of SSI's and Airthme Provider's expansion costs, and/or pay fees and charges for Services provided in the expanded geographic area over and above the fees and charges set forth in the Fees Schedule. Notwithstanding the foregoing, neither SSI nor Airtime Provider shall have any obligation to expand the geographic areas covered by the SSI Network in response to a request for such expansion made by Company.
- 7: Billing Procedure. SSI shall invoice Company on a monthly basis for all fees and charges incurred by Company under this Agreement. All fees and charges shall be due and payable by Company within thirty (30) days following the date of SSI's invoice.

Any undisputed balance not paid by such due date shall bear interest from and after the invoice date at the lesser of one and one half percent (11/2%) per month (18% per annum) or the maximum rate allowed by law. All sales, use, withholding or other taxes, fees, tariffs, surcharges, assessments or any other charge imposed by a governmental or regulatory authority relating to this Agreement or the Services shall be paid by Company, including but not limited to any taxes, fees, tariffs, surcharges or assessments imposed directly or indirectly on SSI by any such governmental or regulatory authority which shall be passed through to Company by SSI. Company shall be liable for all fees and charges incurred under this Agreement, whether or not Company collects any fees and charges from its Customers.

#### 8. Company Responsibilities.

- (a) Company shall comply with all laws, rules and regulations applicable to Company's business and provision of the Application.
- (b) Company shall be solely responsible for procuring any and all other services necessary for the Application, including, without limitation, the provision of support services to its Customers, and shall be solely responsible for any and all costs and expenses related thereto.
- (c) Company shall be solely responsible for procuring, installing, servicing and maintaining any and all hardware (including, without limitation, Transceivers) and software necessary for Company's use of the Application and Transceivers in connection with the Services.
- (d) Company shall execute and maintain in full force and effect during the term of this Agreement SSI's standard software license for use of the SmartMeter<sup>TM</sup> system software.
- Disclaimer of Warranties and Limitation of Liabilities.
- (a) EXCEPT AS EXPRESSLY SET FORTH HEREIN, SSI MAKE NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE SERVICES, THE TRANSCEIVERS, THE APPLICATION, THE SSI NETWORK, OR ANY COMPONENT THEREOF, AND HEREBY EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, RELATING THERETO,

- INCLUDING, WITHOUT LIMITATION, THE IMPLIED. WARRANTIES MERCHANTABILITY. FITNESS FOR Α PARTICULAR USE OR PURPOSE OR NON-INFRINGEMENT. Under no circumstances shall SSI or its Affiliates be liable to Company, any Customer or any other Person for any loss, injury or damage, of whatever kind or nature, resulting from or arising out of any mistakes, errors, omissions, delays or interruptions in the receipt, transmission, loss or storage of any messages, signals or information arising out of or in connection with the Services, the Application, or the Application's use of the SSI Network. WITHOUT LIMITING GENERALITY OF THE FOREGOING, SSI AND ITS AFFILIATES SHALL IN NO EVENT BE LIABLE TO COMPANY, ANY CUSTOMER OR ANY OTHER PERSON FOR INDIRECT. INCIDENTAL OR SPECIAL DAMAGES, LOST PROFITS, LOST SAVINGS OR ANY OTHER FORM OF CONSEQUENTIAL DAMAGES. REGARDLESS OF THE FORM OF ACTION. EVEN IF SSI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.
- (b) EXCEPT WITH RESPECT TO SSI'S INDEMNITY OBLIGATIONS HEREIN, THE LIABILITY OF SSI FOR ANY CLAIM ARISING OUT OF THIS AGREEMENT OR THE SERVICES PROVIDED HEREUNDER, REGARDLESS OF THE FORM OF ACTION, SHALL NOT EXCEED IN THE AGGREGATE THE SUMS RECEIVED BY SSI HEREUNDER DURING THE TWELVE (12) MONTHS PRECEDING THE EVENT WHICH GAVE RISE TO SUCH CLAIM. CLAIMS NOT MADE WITHIN SIX (6) MONTHS AFTER THE FIRST EVENT GIVING RISE TO A CLAIM SHALL BE DEEMED WAIVED BY COMPANY.
- Company acknowledges Application utilizes certain wireless messaging services provided through Airtime Provider and its Affiliates. AIRTIME PROVIDER MAKES NO WARRANTIBS. EXPRESS OR IMPLIED, CONCERNING ITS SERVICES, THE WIRELESS MESSACING NETWORKS THROUGH WHICH SERVICES ARE PROVIDED. APPLICATION OR ANY COMPONENT THEREOF, AND EXPRESSLY DISCLAIMS ALL WARRANTIES. EXPRESS. OR IMPLIED. RELATED THERETO, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. Under no

circumstances shall Airtime Provider be liable to Company or any other Person for any loss, injury or damage, of whatever kind or nature, resulting from or arising out of any mistakes, errors, omissions, delays or interruptions in the receipt, transmission or storage of any messages, signals or information arising out of or in connection with its services, the Application or the Application's use of Airtime Provider's wireless messaging network. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, AIRTIME PROVIDER SHALL IN NO EVENT BE LIABLE TO COMPANY OR ANY OTHER PERSON FOR INDIRECT INCIDENTAL OR SPECIAL DAMAGES, LOST PROFITS, LOST SAVINGS OR ANY OTHER FORM OF CONSEQUENTIAL DAMAGES REGARDLESS OF THE FORM OF ACTION, EVEN IF AIRTIME PROVIDER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### 10. Indemnity.

- (a) Company shall defend, indemnify and hold SSI and its Affiliates and all present and future directors, officers, employees and agents thereof harmless from and against any and all liabilities, losses, damages and costs, including reasonable attorneys' fees, resulting from, arising out of, or in any way connected with: (i) any breach by Company of any warranty, representation, covenant or obligation contained herein; (ii) the performance of Company's obligations hereunder; (ili) any use by Company or any Customer of the Application or Services not authorized by this Agreement; or (iv) any breach by SSI of its obligations to Airtime Provider which is directly caused by a breach by Company of any of its obligations hereunder, Company's indemnity obligations under this Section 10 shall survive the termination or expiration of this Agreement.
- (b) Subject to the provisions of Section 9 above, SSI shall defend, indemnify, and hold Company and its Affiliates and all present and future directors, officers, employees and agents thereof harmless from and against any and all liabilities, losses, damages and costs, including reasonable attorneys' fees, resulting from, arising out of, or in any way connected with: (i) any breach by SSI of any warranty, representation, covenant or obligation contained herein; or (ii) the performance of SSI's obligations hereunder. SSI's indemnity obligations under this Section 10 shall survive the termination or expiration of this Agreement.

#### 11. Termination.

- (a) For purposes of this Agreement "Event of Default" shall mean: (i) failure by a party to observe or perform in any material respect any of its material covenants or obligations contained in this Agreement; or (ii) a party's insolvency, assignment for the benefit of creditors, appointment or sufferance of appointment of a trustee, a receiver or similar officer, or commencement of a proceeding seeking reorganization, rehabilitation, liquidation or similar relief under the bankruptcy, insolvency or similar debtor-relief statutes.
- (b) Upon the occurrence of an Event of Default, the party not in default shall have the right to terminate this Agreement upon written notice to the defaulting party if the defaulting party fails to cure such default within thirty (30) days of receiving such notice.
- (c) Upon the termination or expiration of the agreement between SSI and the Airtime Provider, or receipt by SSI of notice to such effect, whichever is earlier, SSI shall have the right to terminate this Agreement upon 30 days written notice to the Company. In such an instance, subject to the terms of Section 9 above, the Company's sole remedy is the return by SSI to the Company of any fees or costs related to the unpaid Services SSI was to provide under the terms and conditions of this Agreement.

#### 12. Rights Upon Termination.

- (a) Upon termination or expiration of this Agreement, SSI and Company, subject to the provisions of Section 12(b) below, will be released from all of their respective obligations occurring or arising after the date of such termination or expiration, except with respect to those obligations which by their nature are designed to survive termination or expiration including without limitation. Sections 6, 7, 9, 10, 12(b) and 13. No termination or expiration of this Agreement will relieve Company from the obligation to pay to SSI any amount due and owing for Services provided or from any liability to SSI arising from Company's breach of this Agreement.
- (b) Upon the termination or expiration of this Agreement, the parties shall cooperate in good faith to wind down the relationship created under this Agreement in an orderly manner. SSI's provision of the Services to Company following the date of any

termination or expiration of this Agreement shall be subject to Company's compliance with the terms and conditions of this Agreement, including, without limitation, Company's timely payment to SSI for Services provided.

#### 13. Confidentiality.

- (a) Each party acknowledges that, during the Term of this Agreement, it may receive Confidential Information of the other party. Each party agrees that it will not use the other party's Confidential Information for purposes other in support of the performance of its obligations under this Agreement. Each party agrees that it will not disclose to third Persons the other party's Confidential Information without the prior written consent of the other party.
- (b) In the event a party is required under applicable law, rule, regulation, court or administrative order to disclose Confidential Information of the other party, the first party shall use commercially reasonable efforts to: (i) give at least ten (10) days prior written notice of such disclosure to the other party; (b) limit such disclosure to the extent practicable; and (c) make such disclosure only to the extent so required. The parties' obligations under this Section 13 shall survive the termination or expiration of this Agreement.
- (c) Upon termination or expiration of this Agreement, all Confidential Information in the possession of one party relating to the business of the other party, in whatever form, shall promptly be returned to that other party upon request.
- (d) Notwithstanding the foregoing disclosure restrictions, SSI shall have the right to (i) make this Agreement available to Airtime Provider for its review and (li) disclose that it is providing the Services to Company.
- (e) Company agrees and acknowledges that any breach of Company's confidentiality obligations under this Agreement will result in irreparable harm to SSI for which damages would be an inadequate remedy. Therefore, notwithstanding anything in this Agreement to the contrary, Company agrees and acknowledges that SSI, in addition to any other remedies available to SSI, may enjoin Company's breach of its confidentiality obligations contained in this Agreement without the posting any form of bond otherwise required in seeking such relief.

#### 14. Miscellaneous.

- (a) Assignment. This Agreement may not be assigned or transferred by either party to any other Person without the prior written consent of the other party. For purposes of this Agreement, an assignment shall include a change of control of a party or any other transfer by operation of law. Notwithstanding the foregoing, SSI may assign this Agreement without the prior consent of Company to (i) any Person acquiring all of the outstanding stock of SSI or all or substantially all of the assets of SSI, or (ii) an Affiliate of SSI. In the event of any assignment of this Agreement, all terms and conditions hereof shall be binding upon and inure to the assignee as though such assignee were an original party hereto.
- (b) Announcements. Neither party shall make or issue any public announcement concerning the subject matter of the Agreement without the prior written consent of the other party; provided, however, that Company shall cooperate with SSI in good faith to issue such public announcements when and where appropriate. Notwithstanding the foregoing SSI shall have the right to disclose that it is providing the Services to Company.
- (c) Force Majeure. Neither party will be liable for any nonperformance under this Agreement (other than non-performance of payment obligations hereunder) due to causes beyond its reasonable control that could not have been reasonably anticipated by the non-performing party as of the execution of this Agreement and that cannot be reasonably avoided or overcome including, without limitation, natural catastrophe, labor dispute or strike, act of God, war, act of terrorism, municipal ordinance, state or federal law, governmental order or regulation.
- (d) Independent Parties. None of the provisions of this Agreement shall be deemed to constitute a partnership, joint venture, employment or any other relationship between the parties hereto, and neither party shall have any authority to bind the other in any manner. Neither party shall have or hold itself out as having any right, authority or agency to act on behalf of the other party in any capacity or in any manner, except as may be specifically authorized in this Agreement.
- (e) Governing Law. The validity, construction and performance of this Agreement will be governed by and construed in accordance with

applicable laws of the State of Delaware without regard to its principles of conflict of law.

- (f) Severability. If any provision of this Agreement shall be held to be illegal, invalid, or unenforceable, such provision will be enforced to the maximum extent permissible so as to effect the intent of the parties, and the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.
- (g) No Waiver. No delay or failure by either party in exercising any right under this Agreement, and no partial or single exercise of that right, shall constitute a waiver of that or any other right.
- (h) Counterparts. This Agreement may be executed in one or more counterparts, each of which will be deemed an original, but which collectively will constitute one and the same instrument.
- (i) Headings. The headings and captions used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.
- (j) Construction. This Agreement has been negotiated by the parties and their respective counsel. This Agreement will be interpreted fairly in accordance with its terms and without any strict construction in favor of or against either party based on draftsmanship of the Agreement or otherwise.
- (k) Complete Agreement. This Agreement, including the Software License and other Exhibits attached hereto, constitutes the entire agreement between the parties with respect to the subject matter hereof, and supersedes and replaces all prior or contemporaneous understandings or agreements, written or oral, regarding such subject matter. No amendment to or modification of this Agreement will be binding unless in writing and signed by a duly authorized representative of both parties.

(1) Dispute Resolution. In the event of any dispute controversy or claim arising out of relating to or in connection with this Agreement, including the interpretation, breach, termination or validity thereof, the parties agree to attempt to resolve such dispute. controversy or claim through amicable settlement discussion. Failing resolution of the dispute, controversy or claim within thirty (30) days after initiation of such settlement discussions, either party may submit the dispute, controversy or claim to final and binding arbitration to be conducted in accordance with the Commercial Rules of the American Arbitration Association ("AAA"), then in effect, as modified herein or by mutual agreement of the parties (the "Rules"). Unless otherwise agreed by the parties. the arbitration will be conducted by a single arbitrator selected in accordance with the Rules; provided, however, such arbitrator must be knowledgeable in the field of telemetry. The arbitration shall be conducted in Atlanta, Georgia. The arbitral award shall be in writing and shall be final and binding on the parties and may include an award of costs. attorneys' including reasonable fees disbursements / costs shared. Judgment on the arbitral award may be entered in any court of competent jurisdiction. Each party retains the right to seek judicial assistance (i) to compel arbitration, (ii) to obtain; interim measures of protection pending arbitration, and (iii) to enforce any decision of the arbitrator, including the final award. Each party shall continue: to perform its respective obligations hereunder pending resolution of any dispute, controversy or claim in accordance with the terms of this Section 14(1).

## Exhibit B - Fees Schedule

## I. AMR Plan

II.

Channe	ls Intervals	Load Profile	Billing Read	On- Demand Reads	Outage/ Restoration Alarms	Monthly Fee
1	15	Daily	Monthly	2	6	\$7.00
2	15	Daily	Monthly	2	6	\$9.00
Additio	mal Reads (incr	emental to	above plan	):		
a,	On-Demand Read	1				\$0.20
b.	Outage / Restorat	ion Notificat	ion			\$0.10
¢.	Meter Diagnostic	Alarm				\$0.10
Other Fe	868			1,0		
a.	CVU (Coverage )	Validation U	nit) monthly i	ee - unlimited	service	\$30.00
ь.	Activation fee per	r unit (one-ti	me)			\$10.00

# **EXHIBIT**

"B"

#### **Karen Cathers**

From:

Karen Cathers [kcathers@trico.coop]

Sent:

Wednesday, January 13, 2010 4:35 PM

To:

'Barbara Keene'; 'Jeffrey Pasquinelli'

Cc:

Vincent Nitido (vnitido@trico.coop)

Subject:

Trico Responses to James Arkoosh Data Requests Regarding REST and Net Metering

Attachments: Arkoosh\_it 11-24-09.pdf; Trico REST James Arkoosh Data Request Response E-01461A-09-0449.doc; Trico Net Metering Tariff James Arkoosh Data Request Response E-01461A-09-

0450.doc; Schedule DH1.pdf

#### Barbara and Jeff,

Per our discussion at today's Open Meeting, please see the attached copy of the Trico responses to Mr. Arkoosh regarding REST and Net Metering (includes the cover letter). If you have any questions please let me know.

Thank you, Karen

Trico Electric Cooperative, Inc. (520) 744-2944 ext 1335

Williams Centre | 8th Floor | 5210 East Williams Circle | Tucson, Arizona 85711-4478 t 520.790.5828 | f520.745.1279

Russell E, Jones
Direct Line:
(520) 202-7833
E-mail: rjones@wechv.com

November 24, 2009

Mr. James M. Arkoosh 65227 E. Emerald Ridge Drive Tucson, AZ 85739-1434

Re:

Net Metering Tariff, Docket No. E-01461A-09-0450

REST, Docket No. E-01461A-09-0449

Dear Mr. Arkoosh:

This will acknowledge receipt of your two November 9, 2009 letters to Vincent Nitido, CEO and General Manager of Trico Electric Cooperative, Inc., in which you set forth questions in the two above named Dockets.

Enclosed please find Trico's responses to each of your questions. As an Intervenor in each of such Dockets you will receive from Trico all of its filings with the Commission and the Commission's Docket Control in each of such Dockets.

Very truly yours,

WATERFALL ECONOMIDIS CALDWELL HANSHAW & VILLAMANA, P.C.

Russell E. Jones

Attorneys for Trico Electric Cooperative, Inc.

nesel 6

REJ/cw Enclosure

cc:

Vin Nitido

Karen Cathers

# TRICO ELECTRIC COOPERATIVE, INC RESPONSES TO JAMES ARKOOSH SET OF DATA REQUESTS NET METERING TARIFF DOCKET NO. E-01461A-09-0450 Dated November 9, 2009

Trico has included answers to the questions pertaining to the SunWatts Program in its' responses to the data request from Mr. Arkoosh regarding the Trico Renewable Energy Standard and Tariff Docket No. E-01461A-09-0449. The following includes Trico's responses to questions from Mr. Arkoosh regarding the Trico Net Metering Tariff application Docket No. E-01461A-09-0450.

(1) QUESTION: Per your tariff request, please provide your actual current hard costs for Bi - directional meters that you are currently providing (equipment costs only):

RESPONSE: The Cooperative net metering tariff includes a one-time up-front payment to Trico from the customer to cover any incremental cost of the meter if they require an upgraded meter due solely for Trico to provide net metering service. The pricing for the smarter meters has come down over the last few years and we hope that this trend will continue. Some existing customers already have the smarter meter capable of providing the data for net metering (e.g. certain time-of-use customers and cogeneration customers). Trico will only charge the incremental meter cost for those customers that require a meter upgrade for net metering service and will base this incremental cost on the actual meter price.

The standard Trico residential meter currently has a price of approximately \$134. This meter is not able to provide the bi-directional interval data necessary to bill a net metering customer. The standard Trico meter capable of providing the data for net metering currently runs about \$350.

**RESPONDENT**: Karen Cathers, Manager of Contracts and Regulatory Affairs

(2) QUESTION: Define what the phrase "watt" "(not kw or kva demand...) as used in your draft tariff means

**RESPONSE:** The watt or "W" is a derived unit of power in the International System of Units (SI). It measures rate of energy conversion. The kilowatt or "kW" is equal to one thousand watts.

**RESPONDENT:** Karen Cathers, Manager of Contracts and Regulatory Affairs

(3) QUESTION: Per R14-2-2304, the utility is required to record the accumulating kWh in both directions in each billing period. Please provide information on the cost of transmitting this data assuming transmitted only once a month on the last day of the month. Please provide detailed information for the proposed administrative charge of \$4.38. Per R14-2-2305, this shall be fully supported via a "cost of services study and benefit

## TRICO ELECTRIC COOPERATIVE, INC RESPONSES TO JAMES ARKOOSH SET OF DATA REQUESTS NET METERING TARIFF DOCKET NO. E-01461A-09-0450 Dated November 9, 2009

cost analysis." Per the above, provide details of any services in the

proposed net metering administrative charge which are currently included in the standard tariff administrative charge of \$15.00.

RESPONSE: The administrative charge included in the Trico proposed net metering tariff of \$4.38 per month is in addition to the charges as billed in accordance with rates and charges under the standard rate schedule. The administrative charge recovers certain incremental costs associated with the additional data requirements required to ensure accurate billing of the net metered customer as well as to determine the cost allocations between Trico, AEPCO and the customer in providing net metering service. In order to determine the appropriate billing for the net metering customer Trico requires at a minimum by-directional 30-minute interval data. The additional monthly cost to collect this data and process it corresponds to \$4.38.

Schedule DH-1 attached provides the calculation of the additional cost and components. The total cost for interval data retrieval of \$5.00 per month corresponds directly to the cell phone charge that Trico receives to download the monthly 30-minute interval data from each meter (charge is based on total data transfer not on the number of times the meter is called). The total cost for interval data reduction/storage of \$1 is to provide a representative portion of the cost for Trico to store, check and reduce the data to monthly total values for transfer to the Trico billing software. The \$6 amount is reduced by \$1.62 which is the meter reading cost included in Trico's standard rate tariffs. The result is an incremental additional monthly meter reading cost for the net metering customer of \$4.38.

The charges described above are based on the difference between the cost to provide service to a standard customer versus the increased cost for a net metering customer. The standard costs included in the approved tariffs were based on the Trico cost of service study approved by the commission in Trico's last rate case (Decision No. 71230). As shown above, the increased cost to provide services to the net metering customer are based on the actual estimate The information provides a simple incremental cost of service of costs. analysis.

**RESPONDENT**: Karen Cathers, Manager of Contracts and Regulatory Affairs

**(4)** QUESTION: Annual Average Avoided Cost: Using 2008 data, please provide a mathematical calculation of what this amount would be under your proposed net metering tariff. (What is the calculated amount per kWh received?) R14-2-2307 (B) requires the utility to "specify standard rates" for annual excess electricity purchased from net metering facilities. Why has the Utility not provided a standard rate?

## TRICO ELECTRIC COOPERATIVE, INC RESPONSES TO JAMES ARKOOSH SET OF DATA REQUESTS

### NET METERING TARIFF DOCKET NO. E-01461A-09-0450 Dated November 9, 2009

RESPONSE: The annual average avoided cost is defined in the Trico Net Metering Tariff as the average annual wholesale fuel and energy costs per kWh charged by the cooperative's wholesale power supplier, Arizona Electric Power Cooperative, Inc. (AEPCO). This definition reflects the incremental costs to the cooperative that the cooperative would purchase from AEPCO for energy, but for the purchase from the Net Metering Facility output. The annual average avoided cost per kWh is the price paid by Trico to the net metering customer for any excess energy credit at the end of the calendar year true up period (May 1 through April 30).

The AEPCO energy price is set by a Commission approved rate tariff (base rate) plus a Commission approved fuel and purchase power cost adjustor (FPPCA), which AEPCO modifies through a semi-annual filing required by the Commission that results in new FPPCA rates each year on April 1<sup>st</sup> and October 1<sup>st</sup>. Below find a spreadsheet summarizing the AEPCO actual energy rates charged to Trico for the period of May 2008 through April 2009, which as an example Trico would use for the purpose of determining the billing credit for the balance of any excess at the end of this example annual period (results in an annual average avoided cost of \$0.04205/kWh).

2008-	2009 Hi	storical Arizona F	Electric Power Coopera	tive Rates
Month	Year	Base Energy Rate	Fuel Adjustor (FPPCA)	Total Energy Rate
		\$/kWh	\$/kWh	\$/kWh
May	2008	0.02073	0.01272	0.03345
Jun	2008	0.02073	0.01272	0.03345
Jul	2008	0.02073	0.01476	0.03549
Aug	2008	0.02073	0.01476	0.03549
Sep	2008	0.02073	0.01476	0.03549
Oct	2008	0.02073	0.02674	0.04747
Nov	2008	0.02073	0.02674	0.04747
Dec	2008	0.02073	0.02674	0.04747
Jan	2009	0.02073	0.02674	0.04747
Feb	2009	0.02073	0.02674	0.04747
Mar	2009	0.02073	0.02674	0.04747
Apr	2009	0.02073	0.02563	0.04636
Average Annual		0.02073	0.02132	0.04205

RESPONDENT: Karen Cathers, Manager of Contracts and Regulatory Affairs

# TRICO ELECTRIC COOPERATIVE, INC RESPONSES TO JAMES ARKOOSH SET OF DATA REQUESTS NET METERING TARIFF DOCKET NO. E-01461A-09-0450 Dated November 9, 2009

(5) QUESTION: Calendar Year. After years of settling with member solargenerating facilities on a December 31 year end, why is the utility requesting an April 30 year end? Please explain why the Utility is expressly reducing payment to a net metering facility by changing to a date that is the most favorable to the Utility and the most disadvantageous to the net metering facility?

**RESPONSE:** In the Trico Net Metering Tariff definitions section, the Calendar Year is defined as May 1 through April 30, for the purpose of determining the billing credit for the balance of any credit due in excess of the amounts owed by the customers to the Cooperative.

Although the net metering tariff allows for the carryover of excess energy produced to be used in subsequent billing months, the Calendar Year true-up limits that carry over for full credit at the retail rate to a twelve month period. The definition of the Calendar Year twelve months ending April 30 will allow Trico to appropriately compensate the customer for excess energy generated in the off-peak season at avoided cost. Preventing the carry over of excess energy produced in the off-peak season to be used in the on-peak summer season will reduce the negative financial impact on the overall membership of the cooperative, as well as, provide an incentive for net metering customers to size their generation to more closely fit their actual load requirements.

RESPONDENT: Karen Cathers, Manager of Contracts and Regulatory Affairs

(6) QUESTION: Calendar Year. Is there any reason TRICO could not implement a year end of September 30. Provide authority from the existing net metering rules that allows the Utility to establish an April 30 yearend while its normal yearend is December 31.

**RESPONSE:** See response to the question 5 above. Trico understands that in R14-2-2306-F of the Net Metering Rules, the Utility is required to define the calendar year that it proposes to utilize for determining the billing credit for the balance of any credit due in excess of the amounts owed by the customers to the Utility at avoided cost.

**RESPONDENT**: Karen Cathers, Manager of Contracts and Regulatory Affairs

(7) QUESTION: An illustration of your current cost of purchasing kWh from AEPCO. Are these costs directly passed on to residential customers?

**RESPONSE:** See response to the question 4 above. Trico passes the wholesale power costs from AEPCO to its members/customers through its rates

# TRICO ELECTRIC COOPERATIVE, INC RESPONSES TO JAMES ARKOOSH SET OF DATA REQUESTS NET METERING TARIFF DOCKET NO. E-01461A-09-0450 Dated November 9, 2009

and Wholesale Power Cost Adjuster, as approved by the Commission in Decision No. 71230.

RESPONDENT: Karen Cathers, Manager of Contracts and Regulatory Affairs

(8) QUESTION: What was your current total cost to purchase one additional kWh from AEPCO on last of July, 2009 and September 2009?

**RESPONSE:** The AEPCO July 2009 and September 2009 energy rate to Trico included a base rate of \$0.02073/kWh and a FPPCA of \$0.02563/kWh for a total energy charge of \$0.04636/kWh.

RESPONDENT: Karen Cathers, Manager of Contracts and Regulatory Affairs

(9) QUESTION: Does TRICO have any ownership interest in AEPCO? If so, in what form?

**RESPONSE:** Trico does not have any ownership of the physical assets of AEPCO. However, Trico is a Class A Member of AEPCO and as such it is one of the member owners of AEPCO, which provides that Trico has two members on the Board of Directors of AEPCO.

RESPONDENT: Karen Cathers, Manager of Contracts and Regulatory Affairs

(10) OUESTION: Is TRICO in partnership with AEPCO?

RESPONSE: No.

**RESPONDENT**: Karen Cathers, Manager of Contracts and Regulatory Affairs

(11) QUESTION: Is it correct to say that TRICO has an ACC approved contract to purchase energy from AEPCO at an approve tariff rate and if TRICO needs incremental energy from AEPCO then TRICO pays the AEPCO the Tariff rate for the incremental energy?

**RESPONSE:** Yes, Trico currently has an all requirements Wholesale Power Contract with AEPCO. Both Trico and AEPCO are regulated by the ACC so their respective rates and charges are prescribed by the ACC.

RESPONDENT: Karen Cathers, Manager of Contracts and Regulatory Affairs

# TRICO ELECTRIC COOPERATIVE, INC

# DEVELOPMENT OF MONTHLY ADMINISTRATIVE CHARGE FOR NET METERING TARIFF

Total Cost for Interval Data Retrieval	\$ 5.00
Total Cost for Interval Data Reduction/Storage	\$ 1.00
Total Meter Reading Cost for Net Metered Customer	\$ 6.00
Meter Reading Cost Recovered in Standard Rate	\$ 1.62
Additional Meter Reading Cost	\$ 4.38

1	BEFORE THE ARIZONA CORPORATION COMMISSION
2	COMMISSIONERS
3	KRISTIN K. MAYES CHAIRMAN GARY PIERCE
4	PAUL NEWMAN
5	SANDRA D. KENNEDY BOB STUMP
6	
7	IN THE MATTER OF THE TRICO ELECTRIC ) DOCKET NO. E-01461A-09-0450 COOPERATIVE, INC.'S APPLICATION FOR )
8	APPROVAL OF A NET METERING TARIFF.
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13	Direct Testimony of
14	
15	Karen Cathers
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17	on Behalf of
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19	Trico Electric Cooperative, Inc.
20	
21	September 30, 2010
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24	
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- Q. Please state your name and business address.
- A. My name is Karen Cathers and my business address is 8600 West Tangerine Road,
  Marana, Arizona, 85658

- Q. What is your position with Trico Electric Cooperative, Inc. ("Trico" or the "Company")?
- A. I am the Chief Operating Officer of Trico.

- 9 Q. Please describe your involvement and responsibilities specifically with Trico's net metering tariff and program.
  - A. Among my responsibilities as Chief Operating Officer of Trico are the management and oversight of the Cooperative's power supply, regulatory affairs and renewable energy programs. The formulation and implementation of Trico's net metering program and tariff are included within those responsibilities.

A.

Q. What is the purpose of your direct testimony?

On behalf of Trico, I am providing additional evidence and testimony supporting Trico's net metering administrative charge as fair and reasonable. In Decision No. 71462 (January 26, 2010), the Commission approved Trico's net metering tariff, including a \$3.38 monthly administrative charge. Mr. Arkoosh believes this charge is unsubstantiated under A.A.C R14-2-2305. But that is simply not the case. Trico supported this charge request through discovery provided to Staff in the original filing, in a manner consistent with net metering proceedings conducted by the Corporation Commission with respect to the other Arizona electric utilities. Trico attached this information to its Petition to Re-Open Decision No. 71462 granted in Decision No. 71694 (May 14, 2010). I understand that information is now part of the record in this case. Trico believes it has fully supported its net metering administrative costs in

- Q. What is Trico attempting to accomplish with its net metering program and technology?
- A. In its net metering program, Trico intended to comply with both the letter and spirit of the ACC's Net Metering Rules (the "Rules"). Trico's directors are member/customers of Trico, elected by Trico customers. With that in mind, the Trico board approved the implementation of a net metering tariff in compliance with the Rules, and provided to participating customers the smart meter technology necessary to understand and make informed decisions regarding their distributed generation system and energy usage. We have found that our member/customers participating in the net metering program are typically focused on such information and demand that we provide it. We believe that information is an essential element of a successful net metering program.

- Q. Please explain what technology Trico uses to provide for net metering as opposed to its standard rate metering.
- A. Certainly. The principal difference between them is that Trico's net metering technology allows the meter to measure energy flow both to the customer and from the customer on a 15 minute interval basis to provide the customer and Trico with the information necessary for an effective net metering program. Fifteen minute interval data is an industry standard for such technology.

For its net metering program, Trico uses an Itron CENTRON meter type, which has an on-board SmartSynch® communications module that is integrated into the meter. I will refer to those elements collectively as the "SmartSynch Metering System." The CENTRON meter communicates with a server running SmartSynch's Transaction

Management System or "TMS" over secure public wireless networks. This means that the SmartSynch Metering System provides information through cell-phone communication. This data is also sent to Trico's internal web page server – so that Trico can provide both usage information and load profile graphs to the customer.

By comparison, Trico's standard meters are read using a power line carrier system, which allows remote meter reads through the Trico distribution wires. This "Standard Meter System" does not provide interval data.

## Q. How many customers currently have the SmartSynch Metering System?

A. Presently we have approximately 2,500 residential customers that have the SmartSynch Metering System. Over the next year, we anticipate installing an additional 500 SmartSynch Metering Systems for residential customers.

## Q. What are the costs for the SmartSynch Metering System?

 A.

Trico purchases the meter (including the communications technology) from SmartSynch, Inc. in accordance with a meter services agreement. I have attached that agreement and the addendum no. 1 to that agreement as Exhibit 1 to my testimony. The fees are

included on the last page of that agreement entitled "Exhibit B - Fee Schedule" and the

addendum.

interval metering is \$5.00 per month. Trico also uses the SmartSynch Metering System

Each CENTRON meter costs \$245. The monthly communications fee for bi-directional

for customers on other more complex rate tariffs such as Time-of-Use ("TOU") and for

large commercial customers. These have different monthly communication charges from

SmartSynch depending the amount and type of data to transfer. In particular the

communication charge for a residential TOU account is \$1.50 per month versus the \$5.00

per month charge for a residential net metering account (which has a higher fee to provide the data for both directions of flow to and from the customer). In addition Trico has some large commercial customer accounts that require more data than for a residential account and the fee is \$7.00 per month, as well as, some system voltage monitors that provide data for reliability purposes with a fee of \$9.00 per month. I have attached an invoice from SmartSynch that shows what Trico pays for a net metering bi-directional meter as Exhibit 2 to my testimony.

# Q. By comparison, what are the costs for a standard meter?

A. A standard meter costs \$101. This includes \$73 for the meter itself, plus \$28 for the communications module. I have attached an invoice from Hunt Technologies that reflects the cost of these meters as Exhibit 3 to my testimony.

The meter reading cost embedded in Trico's standard rate tariffs is \$1.62 per month. The \$1.62-charge is what Trico included as a line item charge in the cost of service study from its last rate case in Docket No. E-01461A-08-0430. Again, Trico's standard meters are read using a powerline carrier system, which allows remote meter reads through the Trico distribution wires. This system required a multi-million dollar investment but that investment is spread over 30,000 customers. The \$1.62 rate was approved by the Commission and reflects that investment and the cost of those readings. However, this system is not able to provide the sophisticated remote reading capability that the SmartSynch Metering System does. As discussed below, it would be prohibitively expensive to upgrade the standard meter system such that it would provide the data equivalent to the SmartSynch Metering System for the few hundred residential customers that will require net metering.

# Q. What is the reasoning behind using SmartSynch technology for net metering customers?

A.

The reason for using such technology is because it is the type of all-in-one meter and communications system that is ideal for meeting the necessary objectives for the few customers on special rate classes spread throughout Trico's service territory. Trico's power line carrier system is efficient for its standard rate class residential customers; and that system is also cost-efficient because the cost is spread over more than approximately 30,000 customers. But it is not cost-efficient for Trico to spend the money needed so that the power line carrier system could accommodate net metering. The SmartSynch technology is far more cost-efficient to accommodate the 200 or so customers with net metering.

# Q. Does the SmartSynch technology, in your opinion, save net metering customers money?

Yes. Implementing the SmartSynch technology (cell phone communication) is much cheaper than Trico physically sending someone out on a special trip just to read the meter each month. Using Mr. Arkoosh's Saddlebrooke location as an example, Trico would have to send a meter reader out to read his meter every month. That means a 24.19-mile trip, taking about 34 minutes each way. At \$16.30 per hour for the employee, and \$0.41 per mile for the vehicle, the cost would be approximately \$38.31 per month. Trico does not yet have a sufficiently concentrated load of net metering customers to provide a reduced per customer cost for such meter reads. Also, Trico has almost fully transitioned to automated meters; so it does not have enough meter readers to perform reads of this nature, and would have to increase its staff to do so. Having an automated meter reading system (SmartSynch) for a \$5.00 communications fee is *clearly* less expensive by comparison, and provides the interval data essential to the success of the net metering program as I have described above.

Q. How did Trico determine the \$3.38 administrative charge for its net metering customers?

A. Trico simply subtracted the \$1.62 standard meter reading cost from the \$5.00 monthly bidirectional communications fee. The difference equals \$3.38.

Q. Did Trico include any costs associated with the cost of the SmartSynch bidirectional meters in determining its administrative charge?

A. No. If Trico had, the incremental cost of the meter (equaling \$144) would have been amortized and added to the \$3.38 charge. For instance, amortizing \$144 over 15 years with a 7% interest/depreciation would have resulted in additional incremental charge of \$1.29 per month. As I testified in my previous answer, the administrative charge is simply the increased cost over what is in standard rates for the monthly communications fee.

Q. Had Trico originally requested a \$4.38 monthly administrative charge?

A. Yes. Trico originally proposed to also include its costs for data storage – estimated to be about \$1.00 per month. Staff recommended against including the data storage cost, but supported the \$3.38 administrative charge. Staff also rejected the customer paying for the incremental cost of the additional metering as an up-front payment.

Q. Are there other costs you have not yet mentioned that Trico currently incurs for net metering that are not included as part of the \$3.38 monthly administrative charge?

A. Yes. Trico incurs additional costs for implementing and coordinating net metering with its billing system. Specifically, Trico had to have special programming installed into its billing system to accommodate net metering customers. Trico staff worked with the software manufacturer for over a year in preparation to implement net metering in its service territory. But because net metering is a complicated tariff, the billing is still not

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26 27 yet automatic; each bill must be checked by hand each month to verify the accuracy of the billing for each net metering customer. The \$3.38 monthly administrative charge contains none of these billing costs.

As stated above, Trico did not get recovery of the up-front difference for the additional metering. Also, Trico did not request to include (in the alternative) the incremental metering costs in the administrative charge. If it had done so, assuming a 15-year life and 7% interest depreciation, Trico could have requested to include an additional \$1.29 in the monthly administrative charge.

Additionally, Trico lost approximately \$142,000 it did not recover in fixed costs related to net metering in 2009. That is the product of the fixed-cost portion of Trico's rate (equal to \$0.08360 per kWh) multiplied by the net metering energy of approximately 1,700,000 kWh. Given how Trico's renewable programs are expanding, it expects this dollar loss to more than double in 2010. This represents an additional cost through future rates to member/customers that do not participate in net metering.

- Q. Do you believe this information provides cost information to justify a charge of \$3.38 charge for Net Metering customers under A.A.C. R14-2-2305?
  - Yes, I do. Rule 2305 indicates that the utility must provide cost of service studies and benefit/cost analyses to support such a charge. As set forth above, we have provided the incremental costs for providing necessary metering and meter reading costs for residential customers who require Net Metering. The identification of these costs which is, in fact, a cost study - indicate that Net Metering creates incremental costs to Trico of \$3.38 per month for the wireless meter reading, \$1.00 per month in incremental costs for additional labor for the Net Metering billing and \$1.29 per month for the SmartSynch meter. This totals \$5.67 per month that I believe is justified by the cost

study. Moreover, using the wireless read methodology is much more economical from a cost/benefit analysis perspective than conducting on-site meter reading or than engaging is a massive upgrade of Trico's powerline carrier system for a handful of its 30,000 customers. Moreover, these nominal incremental costs provide Net Metering customers the opportunity to "sell" their excess electricity to Trico – something that would not be possible without these costs.

Even though I believe that Trico could justify a higher monthly charge, it is not seeking to do so at this time.

### Is Trico's \$3.38 administrative charge in line with some of the other incremental Q. charges for net metering permitted for other Arizona electric cooperatives?

Α. Yes. I believe the range that cooperatives were allowed to charge is between \$2.70 (for Sulphur Springs Valley Electric Cooperative, Inc.) to \$6.95 (for Navopache Electric Cooperative, Inc.). Mohave Electric Cooperative, Inc.'s net metering charge is \$5.50 per month. Trico's \$3.38 administrative charge is toward the low end of that range, is comparable to that of other cooperatives, and ties directly to the incremental cost of the net metering.

- Q. You mentioned Trico's renewable programs above, is there a correlation between Trico's net metering programs and its renewable energy programs?
- A. Yes. Typically net metering customers have installed a renewable system and received incentives or "rebates" from Trico through its Renewable Energy Standard and Tariff Implementation Plan ("REST Plan"). Mr. Arkoosh is no exception, as he received a rebate for a 5,100-Watt rooftop photovoltaic system.

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- Q. How much did Mr. Arkoosh receive as a rebate for his system?
- A. Mr. Arkoosh received a rebate of approximately \$18,198 for his renewable system.

- Q. How did Trico fund the \$18,198 rebate for Mr. Arkoosh?
- A. The rebate was funded by a surcharge Trico assesses to every member-customer to implement its REST Plan programs. Currently, the residential surcharge is \$2.00 a month.

Q. Given the generous amount Mr. Arkoosh received as a rebate for his renewable system, are you surprised that he is disputing a \$3.38 monthly administrative charge that allows him to reap the full benefit of his renewable system?

A. Yes. Trico had shown in the original case (through the discovery provided to Staff and included in its Petition) how the \$3.38 administrative charge for net metering is entirely reasonable. I, as well as other members of Trico's senior management, have attempted to explain on several occasions the justification for this modest charge. We (meaning the senior management) provided documentation relating to the cost of service and the cost-benefit analysis associated with the increase in Trico's net metering charges beyond those of other customers in the same rate class. We have provided ample explanation and data in accordance with A.A.C. R14-2-2305 of the net metering rules. We are perplexed as to why Mr. Arkoosh continues to pursue this issue – especially considering how he has benefited from Trico's programs overall.

- Q. Does it make sense, Ms. Cathers, to increase Trico's REST surcharge to further offset the communications fee instead of requiring net metering customers with renewable systems to pay \$3.38 per month.
- A. No. Mr. Arkoosh has received a substantial benefit (courtesy all Trico members paying the REST surcharge) in the form of an \$18,198 rebate for his renewable energy system.

It is unfair for Mr. Arkoosh to receive an additional subsidy from these other members (through increasing the REST surcharge or otherwise) to cover the incremental cost for the communications fee – above what is in standard rates for meter reading. Further, Trico's REST funds are committed for the foreseeable future; to divert funds towards covering those incremental net metering costs would take away from renewable programs for other members.

### Q. Do you have anything else you would like to add to your testimony?

Yes. Trico has spent considerable time and resources trying to address Mr. Arkoosh's concerns. It has taken significant management time and considerable expense to continue to justify a charge that is both documented and consistent with the Commission's policy on metering charges. Trico has shown that the \$3.38 monthly administrative charge provides a small offset to the overall incremental costs of net metering that Trico incurs to allow the net metering customers to realize the full benefits of their renewable systems. It does not cover all of the costs; to the contrary, it only covers the incremental costs for the monthly communications fee above what is in base rates for meter reading.

My testimony and the evidence that is already in the record in this docket shows that the SmartSynch technology is a cost-efficient and effective way for Trico to implement net metering in its service territory. The Commission has already found the \$3.38 monthly administrative charge to be reasonable and in accordance with its net metering rules. That finding should be affirmed here.

# Q. Does this conclude your direct testimony?

A. Yes, it does.

# **EXHIBIT**

"1"

### SSI SERVICES AGREEMENT

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This SSI Services Agreement ("Agreement") is made and entered into by and between SmartSynch, Inc. ("SSI"), a Delaware corporation, and TRIC. O ("Company"), a ARIZ ON A corporation.

WHEREAS, SSI provides services in support of and related to its proprietary SmartMeter<sup>TM</sup> wireless data processing system;

WHEREAS, Company desires to receive SSI's services for use in connection with Company's Application (as defined in Exhibit A); and

WHEREAS, SSI desires to provide its services to Company for use in connection with the Application pursuant to the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the covenants and obligations contained herein, the parties agree as follows:

- 1. Definitions. All capitalized terms used herein shall have the meanings given to them in the terms and conditions set forth in <u>Exhibit A</u> attached hereto and incorporated herein by this reference, unless otherwise indicated.
- 2. Services. SSI agrees to provide to Company the Services, subject to and in accordance with the terms and conditions of this Agreement, including without limitation, the terms and conditions contained on Exhibit A.
- 3. Fees. In exchange for its receipt of the Services, Company agrees to pay SSI the fees and charges set forth in Exhibit B ("Fees Schedule") attached hereto and incorporated herein by this reference.
- 4. Term. The term of this Agreement shall commence as of the date this Agreement is executed by SSI ("Effective Date") and shall continue for a period of two (2) year(s) thereafter ("Initial Term"). The Initial Term of this Agreement will automatically renew for additional, successive one (1) year terms (each a "Renewal Term") upon the expiration of the Initial Term and any Renewal Terms, unless either party notifies the other of its desire to terminate this Agreement no later than sixty (60) days prior to the expiration of the then current term. The Initial Term and all Renewal Terms, if any, shall collectively be known as the "Term" of this Agreement.
- 5. Notice. Any notice or other communication herein required or permitted to be given shall be in writing and may be personally served, delivered via certified mail return receipt requested, or delivered by a recognized overnight courier. Notice shall be deemed to have been received (a) on the date of delivery when delivered in person and signed for by the person to whom the notice is addressed, (b) on the date of delivery as indicated by the postal service when delivered by certified mail, or (c) on the date of delivery as indicated by the overnight courier when delivered by overnight courier service. Notices shall be delivered to the following persons and addresses, unless otherwise indicated in writing by the parties during the Term:

To SSI: SmartSynch, Inc.

4400 Old Canton Road

Suite 300

Jackson, MS 39211

Telephone: (601) 362-1780

Facsimile:

(601) 362-1787

Attention:

Stephen D. Johnston

To Company:

Telephone:

Facsimile:

Attention:

IN WITNESS WHEREOF, SSI and Company have executed this Agreement as of the Effective Date.

SMARTSYNCH, INC.

By: Title:

Date:

COMPANY:

Ву: Title:

TECHNICAL SERVICES Date:

### Exhibit A - Terms and Conditions

### 1. Definitions.

- (a) Affiliate: As applied to any Person, any other Person directly or indirectly controlling, controlled by, or under common control with, that Person. For purposes of this definition, "control" (including with correlative meanings, the terms "controlling", "controlled by", and "under common control with"), as applied to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of that Person through the ownership of voting securities, by contract or otherwise.
- (b) Airtime Provider: The Person or Persons that provide and control the two-way wireless messaging system network which SSI uses to provide its Data Processing Services.
- (c) Application: The automation systems of Company, including but not limited to automated meter reading.
- (d) Confidential Information: Any business, marketing, sales, financial or technical information, including, without limitation, any information relating to present and future business operations or financial condition, and all other information of any kind which may reasonably be deemed confidential or proprietary, disclosed by one party to the other pursuant to this Agreement, including without limitation information which is designated or identified "confidential," ลร "proprietary" or in some other manner to indicate its confidential nature. The terms and conditions of this Agreement will be deemed Confidential Information of both parties. Notwithstanding the above, "Confidential Information" does not include information that (i) is or becomes generally known or available by publication, commercial use or otherwise through no fault of the receiving party; (ii) was known by the receiving party at the time of disclosure by the disclosing party as evidenced by competent written proof; (iii) is independently developed by the receiving party without use of the disclosing party's Confidential Information, reasonable proof of which can be demonstrated by the receiving party; or (iv) is lawfully obtained from a third Person who has the right to make such disclosure without restriction.
- (e) Customer: A customer of Company that is an end-user of the Application.

- (f) Data Processing Services: The collection, analysis and reporting of utility meter data provided by SSI.
- (g) Person: Any individual, company, corporation, firm, partnership, joint venture, association, organization or trust, in each case whether or not having a separate legal identity.
- (h) PIN: A unique, Transceiver specific, personal identification number or other form of identification number to be assigned by SSI in accordance with the provisions of Section 3(b) below.
- (i) Services: The services provided by SSI to Company pursuant to this Agreement including but not limited to Data Processing Services and Training Services.
- Provider's two-way wireless messaging system network, utilized by SSI to provide its Data Processing Services.
- (k) Training Services: Training programs provided by SSI to Company for instruction in use of the SmartMeter<sup>TM</sup> system and related software.
- (I) Transceiver: Any fixed location wireless messaging unit owned or controlled by Company that SSI deems acceptable for use on the SSI Network in connection with the Application.

### 2. Services - Conditions of Use.

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- (a) SSI will provide the Services to Company for use only in connection with the Application. Any use of the Services by Company or Customers other than as permitted under this Agreement is expressly prohibited. SSI shall be permitted to provide the Services through its Affiliates.
- (b) SSI's provision of the Services to Company shall at all times be subject to:
- (i) the terms and conditions set forth in this Agreement;
- (ii) the availability of SSI Network; and

- (iii) SSI's or Airtime Provider's approval of the Application and its compatibility with the Services and the SSI Network.
- (c) Should Company's or a Customer's use of the Application adversely affect the SSI Network, any Transceiver, or the ability of SSI or Airtime Provider to provide their respective services in an efficient and timely manner, SSI shall have the right, without any liability to Company or its Customers, to discontinue the provision of Data Processing Services until such time as the problem is resolved to the satisfaction of SSI and Airtime Provider.
- (d) Company shall provide, at no cost to SSI, dedicated or dial-up access lines and trunks (i.e., no 800/888 access) to the SSI Network as may be necessary for data entry and retrieval by Company and/or its Customers. Neither SSI nor Airtime Provider shall have any obligation to provide or supply any such access lines and trunks to Company or its Customers.
- (e) This Agreement shall not constitute an exclusive arrangement between the parties, and, notwithstanding anything to the contrary herein, SSI expressly reserves the right, among other things, to promote, solicit, market and sell the Services, or any other data processing or information services and applications available by or through SSI and its Affiliates, directly or indirectly to other Persons.

### 3. Transceivers.

- (a) All Transceivers utilized by SSI to provide the Data Processing Services shall comply with the terms and conditions of this Agreement and such other requirements as SSI may provide to Company in writing from time to time. Failure by Company to comply with SSI's policies, directives and procedures for activation may lead to delay in the activation of a Transceiver.
- (b) SSI shall assign a PIN to each Transceiver to be utilized by SSI to provide the Data Processing Services. All PINs assigned by SSI shall remain the property of SSI or Airtime Provider. SSI or Airtime Provider shall have the right to utilize PINs which are not utilized by Company, as well as PINs associated with deactivated Transceivers, as SSI or Airtime Provider may determine from time to time.
- 4. Activation Procedures. Transceivers will be activated for use on the SSI Network within seventy-

- two (72) hours of SSI's receipt of Company's written request for activation.
- 5. Training Services. At Company's request, SSI will provide Training Services at times and locations mutually agreeable to the parties. Company shall bear all Company costs and expenses incurred by Company in receiving the Training Services. Company shall pay to SSI the Training Services fees as set forth in the Fees Schedule. Company shall reimburse SSI for all reasonable out-of-pocket travel and lodging expenses associated with such Training Services.

### 6. Fees.

- (a) Company shall pay to SSI the fees and charges set forth in the Fees Schedule in exchange for the Services received by Company. The fees and charges reflected in the Fees Schedule are applicable only to Services provided in connection with the Application.
- (b) The fees and charges set forth in the Fees Schedule apply to Services provided by SSI in the geographic areas covered by the SSI Network as of the Effective Date, and as such geographic areas may be expanded from time to time in the normal course of SSI's business. SSI will cooperate with Company in conveying to Airtime Provider any requests by Company to expand the geographic areas covered by the SSI Network to include Company designated locations. Company acknowledges, however, that any expansion of the geographic areas covered by the SSI Network (i) will be subject to Airtime Provider's approval and timetable for expansion, and (ii) require Company's agreement to activate and maintain an agreed upon level of net additional Transceivers, to pay all or a portion of SSI's and Airtime Provider's expansion costs, and/or pay fees and charges for Services provided in the expanded geographic area over and above the fees and charges set forth in the Fees Schedule. Notwithstanding the foregoing, neither SSI nor Airtime Provider shall have any obligation to expand the geographic areas covered by the SSI Network in response to a request for such expansion made by Company.
- 7: Billing Procedure. SSI shall invoice Company on a monthly basis for all fees and charges incurred by Company under this Agreement. All fees and charges shall be due and payable by Company within thirty (30) days following the date of SSI's invoice.

Any undisputed balance not paid by such due date shall bear interest from and after the invoice date at the lesser of one and one half percent (11/2%) per month (18% per annum) or the maximum rate allowed by law. All sales, use, withholding or other taxes, fees, tariffs, surcharges, assessments or any other charge imposed by a governmental or regulatory authority relating to this Agreement or the Services shall be paid by Company, including but not limited to any taxes, fees, tariffs, surcharges or assessments imposed directly or indirectly on SSI by any such governmental or regulatory authority which shall be passed through to Company by SSI. Company shall be liable for all fees and charges incurred under this Agreement, whether or not Company collects any fees and charges from its Customers.

### 8. Company Responsibilities.

- (a) Company shall comply with all laws, rules and regulations applicable to Company's business and provision of the Application.
- (b) Company shall be solely responsible for procuring any and all other services necessary for the Application, including, without limitation, the provision of support services to its Customers, and shall be solely responsible for any and all costs and expenses related thereto.
- (c) Company shall be solely responsible for procuring, installing, servicing and maintaining any and all hardware (including, without limitation, Transceivers) and software necessary for Company's use of the Application and Transceivers in connection with the Services.
- (d) Company shall execute and maintain in full force and effect during the term of this Agreement SSI's standard software license for use of the SmartMeter<sup>TM</sup> system software.
- Disclaimer of Warranties and Limitation of Liabilities.
- (a) EXCEPT AS EXPRESSLY SET FORTH HEREIN, SSI MAKE NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE SERVICES, THE TRANSCEIVERS, THE APPLICATION, THE SSI NETWORK, OR ANY COMPONENT THEREOF, AND HEREBY EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, RELATING THERETO,

- INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OP MERCHANTABILITY, **FITNESS** FOR Α PARTICULAR USE OR PURPOSE OR NON-INFRINGEMENT. Under no circumstances shall SSI or its Affiliates be liable to Company, any Customer or any other Person for any loss, injury or damage, of whatever kind or nature, resulting from or arising out of any mistakes, errors, omissions, delays or interruptions in the receipt, transmission, loss or storage of any messages, signals or information arising out of or in connection with the Services, the Application, or the Application's use of the SSI Network WITHOUT ·· LIMITING GENERALITY OF THE FOREGOING, SSI AND ITS AFFILIATES SHALL IN NO EVENT BE LIABLE TO COMPANY, ANY CUSTOMER OR ANY OTHER PERSON FOR INDIRECT, INCIDENTAL OR SPECIAL DAMAGES, LOST PROFITS, LOST SAVINGS OR ANY OTHER FORM OF CONSEQUENTIAL DAMAGES. REGARDLESS OF THE FORM OF ACTION. EVEN IF SSI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.
- (b) EXCEPT WITH RESPECT TO SSI'S INDEMNITY OBLIGATIONS HEREIN, THE LIABILITY OF SSI FOR ANY CLAIM ARISING OUT OF THIS AGREEMENT OR THE SERVICES PROVIDED HEREUNDER, REGARDLESS OF THE FORM OF ACTION, SHALL NOT EXCEED IN THE AGGREGATE THE SUMS RECEIVED BY SSI HEREUNDER DURING THE TWELVE (12) MONTHS PRECEDING THE EVENT WHICH GAVE RISE TO SUCH CLAIM. CLAIMS NOT MADE WITHIN SIX (6) MONTHS AFTER THE FIRST EVENT GIVING RISE TO A CLAIM SHALL BE DEEMED WAIVED BY COMPANY.
- ··(c) Company acknowledges Application utilizes certain wireless messaging services provided through Airtime Provider and its Affiliates. AIRTIME PROVIDER MAKES NO WARRANTIES. **EXPRESS** OR IMPLIED. CONCERNING ITS SERVICES, THE WIRELESS MESSAGING NETWORKS THROUGH WHICH SERVICES ARE PROVIDED. APPLICATION OR ANY COMPONENT THEREOF, AND EXPRESSLY DISCLAIMS ALL WARRANTIES, EXPRESS. OR IMPLIED, RELATED THERETO, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. Under no

circumstances shall Airtime Provider be liable to Company or any other Person for any loss, injury or damage, of whatever kind or nature, resulting from or arising out of any mistakes, errors, omissions, delays or interruptions in the receipt, transmission or storage of any messages, signals or information arising out of or in connection with its services, the Application or the Application's use of Airtime Provider's wireless messaging network. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, AIRTIME PROVIDER SHALL IN NO EVENT BE LIABLE TO COMPANY OR ANY OTHER PERSON FOR INDIRECT INCIDENTAL OR SPECIAL DAMAGES, LOST PROFITS, LOST SAVINGS OR ANY OTHER FORM OF CONSEQUENTIAL DAMAGES REGARDLESS OF THE FORM OF ACTION, EVEN IF AIRTIME PROVIDER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

### 10. Indemnity.

- (a) Company shall defend, indemnify and hold SSI and its Affiliates and all present and future directors, officers, employees and agents thereof harmless from and against any and all liabilities. losses, damages and costs, including reasonable attorneys' fees, resulting from, arising out of, or in any way connected with: (i) any breach by Company of any warranty, representation, covenant or obligation contained herein; (ii) the performance of Company's obligations hereunder; (iii) any use by Company or any Customer of the Application or Services not authorized by this Agreement; or (iv) any breach by SSI of its obligations to Airtime Provider which is directly caused by a breach by Company of any of its obligations hereunder, Company's indemnity obligations under this Section 10 shall survive the termination or expiration of this Agreement.
- (b) Subject to the provisions of Section 9 above, SSI shall defend, indemnify, and hold Company and its Affiliates and all present and future directors, officers, employees and agents thereof harmless from and against any and all liabilities, losses, damages and costs, including reasonable attorneys' fees, resulting from, arising out of, or in any way connected with: (i) any breach by SSI of any warranty, representation, covenant or obligation contained herein; or (ii) the performance of SSI's obligations hereunder. SSI's indemnity obligations under this Section 10 shall survive the termination or expiration of this Agreement.

### 11. Termination.

- (a) For purposes of this Agreement "Event of Default" shall mean: (i) failure by a party to observe or perform in any material respect any of its material covenants or obligations contained in this Agreement; or (ii) a party's insolvency, assignment for the benefit of creditors, appointment or sufferance of appointment of a trustee, a receiver or similar officer, or commencement of a proceeding seeking reorganization, rehabilitation, liquidation or similar rollef under the bankruptcy, insolvency or similar debtor-relief statutes.
- (b) Upon the occurrence of an Event of Default, the party not in default shall have the right to terminate this Agreement upon written notice to the defaulting party if the defaulting party fails to cure such default within thirty (30) days of receiving such notice.
- (c) Upon the termination or expiration of the agreement between SSI and the Airtime Provider, or receipt by SSI of notice to such effect, whichever is earlier, SSI shall have the right to terminate this Agreement upon 30 days written notice to the Company. In such an instance, subject to the terms of Section 9 above, the Company's sole remedy is the return by SSI to the Company of any fees or costs related to the unpaid Services SSI was to provide under the terms and conditions of this Agreement.

### 12. Rights Upon Termination.

- (a) Upon termination or expiration of this Agreement, SSI and Company, subject to the provisions of Section 12(b) below, will be released from all of their respective obligations occurring or arising after the date of such termination or expiration, except with respect to those obligations which by their nature are designed to survive termination or expiration including without limitation. Sections 6, 7, 9, 10, 12(b) and 13. No termination or expiration of this Agreement will relieve Company from the obligation to pay to SSI any amount due and owing for Services provided or from any liability to SSI arising from Company's breach of this Agreement.
- (b) Upon the termination or expiration of this Agreement, the parties shall cooperate in good faith to wind down the relationship created under this Agreement in an orderly manner. SSI's provision of the Services to Company following the date of any

termination or expiration of this Agreement shall be subject to Company's compliance with the terms and conditions of this Agreement, including, without limitation, Company's timely payment to SSI for Services provided.

### 13. Confidentiality.

- (a) Each party acknowledges that, during the Term of this Agreement, it may receive Confidential Information of the other party. Each party agrees that it will not use the other party's Confidential Information for purposes other in support of the performance of its obligations under this Agreement. Each party agrees that it will not disclose to third Persons the other party's Confidential Information without the prior written consent of the other party.
- (b) In the event a party is required under applicable law, rule, regulation, court or administrative order to disclose Confidential Information of the other party, the first party shall use commercially reasonable efforts to: (i) give at least ten (10) days prior written notice of such disclosure to the other party; (b) limit such disclosure to the extent practicable; and (c) make such disclosure only to the extent so required. The parties' obligations under this Section 13 shall survive the termination or expiration of this Agreement.
- (c) Upon termination or expiration of this Agreement, all Confidential Information in the possession of one party relating to the business of the other party, in whatever form, shall promptly be returned to that other party upon request,
- (d) Notwithstanding the foregoing disclosure restrictions, SSI shall have the right to (i) make this Agreement available to Airtime Provider for its review and (ii) disclose that it is providing the Services to Company.
- (e) Company agrees and acknowledges that any breach of Company's confidentiality obligations under this Agreement will result in irreparable harm to SSI for which damages would be an inadequate remedy. Therefore, notwithstanding anything in this Agreement to the contrary, Company agrees and acknowledges that SSI, in addition to any other remedies available to SSI, may enjoin Company's breach of its confidentiality obligations contained in this Agreement without the posting any form of bond otherwise required in seeking such relief.

### 14. Miscellaneous.

- (a) Assignment. This Agreement may not be assigned or transferred by either party to any other Person without the prior written consent of the other party. For purposes of this Agreement, an assignment shall include a change of control of a party or any other transfer by operation of law. Notwithstanding the foregoing, SSI may assign this Agreement without the prior consent of Company to (i) any Person acquiring all of the outstanding stock of SSI or all or substantially all of the assets of SSI, or (ii) an Affiliate of SSI. In the event of any assignment of this Agreement, all terms and conditions hereof shall be binding upon and inure to the assignce as though such assignce were an original party hereto.
- (b) Announcements. Neither party shall make or issue any public announcement concerning the subject matter of the Agreement without the prior written consent of the other party; provided, however, that Company shall cooperate with SSI in good faith to issue such public announcements when and where appropriate. Notwithstanding the foregoing SSI shall have the right to disclose that it is providing the Services to Company.
- (c) Force Majeure. Neither party will be liable for any nonperformance under this Agreement (other than non-performance of payment obligations hereunder) due to causes beyond its reasonable control that could not have been reasonably anticipated by the non-performing party as of the execution of this Agreement and that cannot be reasonably avoided or overcome including, without limitation, natural catastrophe, labor dispute or strike, act of God, war, act of terrorism, municipal ordinance, state or federal law, governmental order or regulation.
- (d) Independent Parties. None of the provisions of this Agreement shall be deemed to constitute a partnership, joint venture, employment or any other relationship between the parties hereto, and neither party shall have any authority to bind the other in any manner. Neither party shall have or hold itself out as having any right, authority or agency to act on behalf of the other party in any capacity or in any manner, except as may be specifically authorized in this Agreement.
- (e) Governing Law. The validity, construction and performance of this Agreement will be governed by and construed in accordance with

applicable laws of the State of Delaware without regard to its principles of conflict of law.

- (f) Severability. If any provision of this Agreement shall be held to be illegal, invalid, or unenforceable, such provision will be enforced to the maximum extent permissible so as to effect the intent of the parties, and the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.
- (g) No Waiver. No delay or failure by either party in exercising any right under this Agreement, and no partial or single exercise of that right, shall constitute a waiver of that or any other right.
- (h) Counterparts. This Agreement may be executed in one or more counterparts, each of which will be deemed an original, but which collectively will constitute one and the same instrument.
- (i) Headings. The headings and captions used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.
- (j) Construction. This Agreement has been negotiated by the parties and their respective counsel. This Agreement will be interpreted fairly in accordance with its terms and without any strict construction in favor of or against either party based on draftsmanship of the Agreement or otherwise.
- (k) Complete Agreement. This Agreement, including the Software License and other Exhibits attached hereto, constitutes the entire agreement between the parties with respect to the subject matter hereof, and supersedes and replaces all prior or contemporaneous understandings or agreements, written or oral, regarding such subject matter. No amendment to or modification of this Agreement will be binding unless in writing and signed by a duly authorized representative of both parties.

(1) Dispute Resolution. In the event of any dispute controversy or claim arising out of relating to or in connection with this Agreement, including the interpretation, breach, termination or validity thereof, the parties agree to attempt to resolve such dispute. controversy or claim through amicable settlement discussion. Failing resolution of the dispute, controversy or claim within thirty (30) days after initiation of such settlement discussions, either party may submit the dispute, controversy or claim to final and binding arbitration to be conducted in accordance with the Commercial Rules of the American Arbitration Association ("AAA"), then in effect, as modified herein or by mutual agreement of the parties (the "Rules"). Unless otherwise agreed by the parties. the arbitration will be conducted by a single arbitrator selected in accordance with the Rules; provided, however; such arbitrator must be knowledgeable in the field of telemetry. The arbitration shall be conducted in Atlanta, Georgia. The arbitral award shall be in writing and shall be final and binding on the parties and may include an award of costs. including reasonable attorneys' fees disbursements / costs shared. Judgment on the arbitral award may be entered in any court of competent jurisdiction. Each party retains the right to seek judicial assistance (i) to compel arbitration, (ii) to obtain; interim measures of protection pending arbitration, and (iii) to enforce any decision of the arbitrator, including the final award. Each party shall continue to perform its respective obligations hereunder pending resolution of any dispute, controversy or claim in accordance with the terms of this Section 14(1).

# Exhibit B - Fees Schedule

## I. AMR Plan

	Channel	s Intervals	Load Profile	Billing Read	On- Demand Reads	Outage/ Restoration Alarms	Monthly Fee
	1	15	Daily	Monthly	2	6	\$7.00
	2	15	Daily	Monthly	2	6	\$9.00
	Additio	nal Reads (inci	emental to	above plan	):		
	a.	On-Demand Read		\$0.20			
	b.	Outage / Restorat		\$0.10			
	¢.	Meter Diagnostic		\$0.10			
11.	Other Fe				<b>:.</b> ?		
	a.	CVU (Coverage)	Validation U	nit) monthly f	ee - unllimited	service	\$30.00
	<b>b</b> .	Activation fee pe		\$10.00			

between SmartSynch, Inc. ("SSP") and Trico Electric Cooperative ("Company") executed on the date(s) below and effective as of This Addendum No. 1 (the "Addendum No. 1") to the SSI Services Agreement dated January 20, 2006 (the "Agreement"), (the "Addendum No. 1 Effective Date"). 2008

- Defined Terms. Except as set forth in this Addendum No. 1, all capitalized terms shall have the meaning as set forth in the Agreement.
- Fees Schedule: Exhibit B of the Agreement is hereby amended to provide for the following pricing: 7

\$1.50 per meter per month	\$5.00 ner meter ner month	ed oo	3/.00 per meter per month	\$9.00 per meter per month
Monthly TOU rate for residential or C&I meters	Daily 1 and 2 channel Load profile residential meters	Daily Single channel I and Profile C&I meters	Daily two channel I and meet of a	Daily two chamica Load profile C&1 meters

Ratification. The other terms and conditions of the Agreement are not modified except as specifically provided in this Addendum No.1 and the parties hereby ratify the Agreement.

Agreed and Accepted:

SmartSynch, Inc.

Title: JO ST TA

)ate: < | 1.1 | 10

Trico Electric Cooperative

Title: (E0/6M)

Title: CC 0/G M

Date: 5 4 1 0

# **EXHIBIT**

"2"



# Invoice

Date Invoice # 12/17/2009 6643

601-362-1780 x1027 www.smartsynch.com

584 586 Install Cost Acct 583 4400 Old Canton Road, Supper de Unit 370 - 540
PO Box 12250
Jackson MS 39236
Install Labor \$ 39. Install Labor \$ 603 604 601 Loan Project ( 605 610 (740C)

Bill To

Trico Electric Cooperative PO Box 930 Marana AZ 85653-0930 United States

Ship To

Trico Electric Cooperative 8600 W. Tangerine Road Marana AZ 85653 United States

Terms	Due Date	PO#	Ship Via	Ship Date
Net 30	1/16/2010	63331		12/16/2009

Tracking Numbers

059900242

Item	Quantity	Description	Unit Price	e Amount
39911230	48	SmartSynch GPRS SmartMeter integrated with Itron CENTRON {CISI - Demand/TOU/Load profile} Form	235	.00 11,280.00
SM150-ATT	48	2S Class 320		.00 480.00
		55 - 11,760 9		
	5.6	% 658 56	1	2.1-
USED IN MARAI	NA -	12 418.56	107.3	135
YES NO		<del>)</del>	Total	\$11,760.00

SmartSynch, Inc.

Remittance Slip

Customer Invoice # **Amount Due Amount Paid**  Trico Electric Cooperative 6643

\$11,760.00

Make Checks Payable To

SmartSynch, Inc. PO Box 12250 Jackson, MS 39236



Invoice

Date	Invoice #
6/16/2010	7487

4400 Old Canton Road Suite 300 Jackson MS 39211 US

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Trico Electric Cooperative PO Box 930 Marana AZ 85653-0930 United States

### Ship To

Trico Electric Cooperative PO Box 930 Marana AZ 85653-0930 United States

Terms	Due Date	PO#	Ship Via	Ship Date
Net 30	7/16/2010			

Tracking Numbers

Item	Quantity	Description		Unit Price	Amount
AT0150 AT0500 AT0700 AT0900	3030 462 771 32	Airtime, Monthly Airtime, Monthly Fee Airtime, Monthly Fee Airtime, Monthly Fee Period: June 1 - 30, 2010 AIRTIME SERVICES		1.50 5.00 7.00 9.00	2,310.00 5,397.00
			Т	otal	\$12,540.00

SmartSynch, Inc.

### Remittance Slip

Customer

Trico Electric Cooperative

Invoice # Amount Due 7487 \$12,540.00

Amount Paid

Make Checks Payable To SmartSynch, Inc. 75 Remittance Drive, Suite 6236 Chicago, IL 60675-6236

# **EXHIBIT**

"3"

HUNT TECHNOLOGIES, LLC 6436 COUNTY ROAD 11 PEQUOT LAKES MN 56472



Phone: 218-562-4877 Fax: 218-562-4879

Federal ID:

Page: 1 Invoice Date

10/12/2009

### Invoice

**BILL TO** 

TRICO ELECTRIC CO-OP, INC. WAYNE CHERNI PO BOX 930

MARANA AZ 85653

SHIP TO

TRICO ELECTRIC CO-OP, INC. BILL COOK 8600 WEST TANGERINE ROAD

MARANA AZ 85653

Customer P 63416	O #		Customer ID	Shipped Via UPS GROUND	<b>Order #</b> S00040916	Invoice # 00098445	<b>Due</b> 11/11/2009
QTY Ordered	QTY Shipped	QTY B/O	Item Number	Description		Cost Per Item	Extended Cost
384	384	0	17101 0002	ENDPOINT TRANSCE	IVER, TS2 CENTRON 24	0 \$73.00	\$28,032.00

l'oided partie. unide el

107.3-535

Subtotal
Tax
Freight
Discount

\$28,032.00 \$1,569.80 \$101.00 \$0.00

Discount:

Terms: 2%10/NET30

\$562.66 Due:

10/22/2009

Control of parties of the

Please Pay This Amount In US Dollars

\$29,702.80



# Invoice

Zia Electrical Products P.O. Box 482 Mountainair, NM 87036 (505)847-2864 Fax-(505)847-0149

DATE	INVOICE#
6/25/2010	12856

BILL TO	
Trico Electric Co op Attn: Accounts Payable P.O. Box 930 Marana, AZ 85653-0930	

SHIP TO	
Trico Electric Co op	
8600 w. Tangerine Rd	
Marana, AZ 85653	

P.O. NUMBER	TERMS	DUE DATE	SHIP	VIA	F.O.B.	PROJECT
63471	Net 30	7/25/2010	6/25/2010			
QUANTITY	ITEM CODE		DESCRIPTIC	N	PRICE EACH	AMOUNT
192	005 Install Cost	EA1100UL-0	ter w/Trico TS2 0L79 <b>584 58</b>		28.00	5,376.00
	Record Uni Install Labo Loan Proje	s 47 e		-		
	(740C)	605 6	510			
				- -	Zia - 5376 ° 3	
	USED	IN MAR	ANA	6.690	3548	
	YES		10 /07		5730,82	
Thank you for your business.				Subtotal	\$5,376.00	
				S	Sales Tax (5.6%)	\$0.00
				E	Balance Due	\$5,376.00

# BEFORE THE ARIZONA CORPORATION COMMISSION

2	COMMISSIONERS					
3	KRISTIN K. MAYES CHAIRMAN GARY PIERCE					
4	PAUL NEWMAN SANDRA D. KENNEDY					
5	BOB STUMP					
6						
7	IN THE MATTER OF THE TRICO ELECTRIC ) DOCKET NO. E-01461A-09-045 COOPERATIVE, INC.'S APPLICATION FOR )					
8	APPROVAL OF A NET METERING TARIFF. )					
9						
10						
11						
12	D. J. Transfers of					
13	Reply Testimony of					
14	Wayner Cathaga					
15	Karen Cathers					
16	on Dobalf of					
17	on Behalf of					
18	Trica Electric Compactive Inc					
19	Trico Electric Cooperative, Inc.					
20	NI					
21	November 30, 2010					
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- Q. Please state your name and business address.
  A. My name is Karen Cathers and my business address is 8600 West Tangerine Road,
  Marana, Arizona, 85658
- Q. Did you previously provide direct testimony in this docket on behalf of Trico Electric Cooperative, Inc. ("Trico" or the "Company")?
- A. Yes.

9 Q. What is the purpose of your reply testimony?

A. I am responding to the Direct Testimony of Barbara Keene that was filed on behalf of Commission and to the comments submitted by Mr. Arkoosh. Trico agrees with Ms. Keene's analysis of the issues in this docket and Trico continues to believe it has fully supported its net metering administrative costs in accordance with the Net Metering rules. I believe Mr. Arkoosh misinterprets what constitutes a "cost study" to support the net metering tariff and simply disagrees with the need for a SmartSynch meter capable of timely bidirectional data monitoring.

Q. Please comment on the Direct Testimony of Ms. Keene.

A. I agree with her conclusion that Trico's net metering administrative charge of \$3.38 per month is reasonable, cost-based and in compliance with the Commission's Net Metering rules. The Commission is entitled to interpret its own rules and Ms. Keene confirms that the information provided by Trico regarding the administrative charge provided sufficient cost-based information under the Net Metering rules for the administrative charge.

Ms. Keene also confirms that net metering is a vastly different service than standard rate metering. It also appears that Staff agrees that the administrative charge actually could be higher than the \$3.38 requested by Trico.

Finally, I agree with Ms. Keene that no evidentiary hearing is necessary. Commission Staff has indicated that is has the necessary cost information required by Rule 2305 under its interpretation of the Net Metering rules.

### Q. Please comment on Mr. Arkoosh's comments.

A. Mr. Arkoosh appears to take issue with the format of the cost information and with the 15 minute interval readings provided by the SmartSynch meters. First, Commission Staff believes that Trico has provided cost information that meets the requirements of the Commission's rules. There is no requirement for a formal third-party cost study as suggested by Mr. Arkoosh.

Second, as I noted in my Direct Testimony, Trico's net metering technology allows the meter to measure energy flow both to the customer and from the customer on a 15 minute interval basis to provide the information necessary for an effective net metering program. The \$5.00 per month charge for a residential net metering account has a higher fee than standard meter reading because it collects the data for *both* directions of flow -- to and from the customer. Fifteen minute interval data is an industry standard for such technology. Setting uniform meter reading parameters is the most efficient and cost effective approach. Moreover, the interval data is critical if there are any questions or disputes about the result of net metering and the amounts owed under the Commission-approved Net Metering tariff. Monthly meter readings are insufficient for such monitoring.

Mr. Arkoosh apparently does not want to pay for the improved metering necessary for him to enjoy the full benefits of his rooftop solar system. However, this technology is necessary for Trico to allow him to do so.

# Q. Mr. Arkoosh asserts that you could read 30 net metering meters for \$38.31. Do you agree?

No. First, that position assumes that monthly readings would be sufficient, which they are not for net metering. Second, it relies on unsubstantiated assumptions about the location of SmartSynch meters and assumes there is zero travel and meter reading time for each meter after the first meter, which is simply not possible. Third, even monthly remote reading for our standard meters results in a cost of \$1.62 per month using our legacy power line carrier system. As I explained in my direct testimony, that system does not provide the two-way meter interval reads that we receive from the SmartSynch meters. To install a similar automated power line carrier system for SmartSynch meters would require a significant capital expense and would not be cost effective compared to the wireless meter reading, given the relatively small number of SmartSynch meters.

## Q. Does this conclude your reply testimony?

A. Yes, it does.



### BEFORE THE ARIZONA CORPORATION COMMISSION

KRISTIN K. MAYES
Chairman
GARY PIERCE
Commissioner
PAUL NEWMAN
Commissioner
SANDRA D. KENNEDY
Commissioner
BOB STUMP
Commissioner

IN THE MATTER OF TRICO ELECTRIC COOPERATIVE, INC.'S APPLICATION FOR APPROVAL OF A NET-METERING TARIFF.

DOCKET NO. E-01461A-09-0450

DIRECT

**TESTIMONY** 

OF

BARBARA KEENE

PUBLIC UTILITIES ANALYST MANAGER

**UTILITIES DIVISION** 

ARIZONA CORPORATION COMMISSION

NOVEMBER 16, 2010

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Resume of Barbara Keene	Appendix

# EXECUTIVE SUMMARY TRICO ELECTRIC COOPERATIVE DOCKET NO. E-01461A-09-0450

Staff finds that Trico's net metering administrative charge of \$3.38 per month, as originally recommended by Staff and approved by the Commission, is reasonable, cost-based, and in compliance with the Net Metering rules.

Direct Testimony of Barbara Keene Docket No. E-0416A-09-0450 Page 1

## INTRODUCTION

- Q. Please state your name and business address.
- A. My name is Barbara Keene. My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. By whom are you employed and in what capacity?

- A. I am employed by the Utilities Division of the Arizona Corporation Commission as a Public Utilities Analyst Manager. My duties include supervising the energy portion of the Telecommunications and Energy Section. A copy of my résumé is provided in Appendix 1.
- Q. As part of your employment responsibilities, were you or someone under your direction assigned to review matters contained in Docket No. E-01461A-09-0450?
- A. Yes.

Q. What is the subject matter of this testimony?

A. The purpose of Staff's testimony is to address the net metering administrative charge for Trico Electric Cooperative, Inc. ("Trico"). Although other matters may have been raised by the other parties, Staff's testimony is directed to Trico's net metering administrative charge.

### TRICO'S NET METERING ADMINISTRATIVE CHARGE

- Q. Are Trico's costs to serve net metering customers different from the costs to serve standard rate customers?
- A. Yes. Net metering is a vastly different service from standard rate metering. With net metering, both load and generation must be metered and recorded. This requires

 additional facilities and communications. Communications is the two-way data transfer equivalent to electronic meter reading. Costs associated with communications and with the additional facilities should be recovered in the monthly customer charge (administrative charge).

# Q. Has Trico provided cost information to support the \$3.38 administrative charge, as required by A.A.C. R14-2-2305?

A. Yes. Trico provided cost support in its original filing, and further cost detail in testimony. A communication charge for a net metering system is \$5.00 per month as shown on invoices from SmartSynch, Inc. The net metering administrative charge is the increased cost over what is in standard rates for the monthly communications fee. The standard tariff monthly customer charges, as approved by the Commission in Trico's last rate case, include meter reading costs of \$1.62. The difference between \$5.00 and \$1.62 is the \$3.38 net metering administrative charge as previously recommended by Staff and approved by the Commission.

## Q. Is Trico's net metering administrative charge of \$3.38 a cost-based rate?

 A.

Yes, the net metering administrative charge is supported by the costs Trico has placed in evidence.

### Q. What does a cost-based rate mean for Trico's members?

A. Since the rate is cost-based, those causing the costs are those paying the costs. To the extent the rate does not cover all costs, e.g., the incremental meter facilities, or if the rate were lowered or eliminated, all Trico member/customers would pay to subsidize net metering customers.

Direct Testimony of Barbara Keene Docket No. E-0416A-09-0450 Page 3

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Q.

A.

cost?

A. No. Trico did not propose a meter charge for net metering.

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Q. Would a net metering meter charge be justified?

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While investment-related costs for a standard meter are included in the standard residential rate customer charge, the cost of a net metering system is more than two times the standard meter. These costs are not included in the \$3.38 administrative charge, but

In its original filing, did Trico propose a charge for the incremental meter facilities

If Trico had proposed a meter charge, Staff might have recommended approval of it.

could justifiably be added to it. Trico estimates this incremental monthly cost to be \$1.29.

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- Q. Is Trico's net metering administrative charge just and reasonable?
- A. Yes, the net metering administrative charge of \$3.38, as originally recommended by Staff and approved by the Commission, is appropriate.

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### CONCLUSION

- Q. What does Staff conclude from the evidence provided in this case?
- A. Staff finds that Trico's net metering administrative charge of \$3.38 per month, as originally recommended by Staff and approved by the Commission, is reasonable, cost-based, and in compliance with the Net Metering rules.

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- Q. Does Staff believe that an evidentiary hearing on this matter is necessary?
- A. Based on the information presented, Staff does not believe that an evidentiary hearing is necessary.
- Q. Does this conclude your direct testimony?
- 26 A. Yes, it does.

### RESUME

### **BARBARA KEENE**

### Education

B.S. Political Science, Arizona State University (1976)
M.P.A. Public Administration, Arizona State University (1982)
A.A. Economics, Glendale Community College (1993)

### **Additional Training**

Management Development Program - State of Arizona, 1986-1987
UPLAN Training - LCG Consulting, 1989, 1990, 1991
various seminars, workshops, and conferences on ratemaking, energy efficiency, rate design, computer skills, labor market information, training trainers, and Census products

### **Employment History**

Arizona Corporation Commission, Utilities Division, Phoenix, Arizona: Public Utilities Analyst Manager (May 2005-present). Supervise the energy portion of the Telecommunications and Energy Section. Conduct economic and policy analyses of public utilities. Coordinate working groups of stakeholders on various issues. Prepare Staff recommendations and present testimony on electric resource planning, rate design, special contracts, energy efficiency programs, and other matters.

Arizona Corporation Commission, Utilities Division, Phoenix, Arizona: Public Utilities Analyst V (October 2001-May 2005), Senior Economist (July 1990-October 2001), Economist II (December 1989-July 1990), Economist I (August 1989-December 1989). Conduct economic and policy analyses of public utilities. Coordinate working groups of stakeholders on various issues. Prepare Staff recommendations and present testimony on electric resource planning, rate design, special contracts, energy efficiency programs, and other matters. Responsible for maintaining and operating UPLAN, a computer model of electricity supply and production costs.

Arizona Department of Economic Security, Research Administration, Economic Analysis Unit: Labor Market Information Supervisor (September 1985-August 1989), Research and Statistical Analyst (September 1984-September 1985), Administrative Assistant (September 1983-September 1984). Supervised professional staff engaged in economic research and analysis. Responsible for occupational employment forecasts, wage surveys, economic development studies, and over 50 publications. Edited the monthly Arizona Labor Market Information Newsletter, which was distributed to about 4,000 companies and individuals.

### **Testimony**

Resource Planning for Electric Utilities (Docket No. U-0000-90-088), Arizona Corporation Commission, 1990; testimony on production costs and system reliability.

Trico Electric Cooperative Rate Case (Docket No. U-1461-91-254), Arizona Corporation Commission, 1992; testimony on demand-side management and time-of-use and interruptible power rates.

Navopache Electric Cooperative Rate Case (Docket No. U-1787-91-280), Arizona Corporation Commission, 1992; testimony on demand-side management and economic development rates.

Arizona Electric Power Cooperative Rate Case (Docket No. U-1773-92-214), Arizona Corporation Commission, 1993; testimony on demand-side management, interruptible power, and rate design.

Tucson Electric Power Company Rate Case (Docket Nos. U-1933-93-006 and U-1933-93-066) Arizona Corporation Commission, 1993; testimony on demand-side management and a cogeneration agreement.

Resource Planning for Electric Utilities (Docket No. U-0000-93-052), Arizona Corporation Commission, 1993; testimony on production costs, system reliability, and demand-side management.

Duncan Valley Electric Cooperative Rate Case (Docket No. E-01703A-98-0431), Arizona Corporation Commission, 1999; testimony on demand-side management and renewable energy.

Tucson Electric Power Company vs. Cyprus Sierrita Corporation, Inc. (Docket No. E-0000I-99-0243), Arizona Corporation Commission, 1999; testimony on analysis of special contracts.

Arizona Public Service Company's Request for Variance (Docket No. E-01345A-01-0822), Arizona Corporation Commission, 2002; testimony on competitive bidding.

Generic Proceeding Concerning Electric Restructuring Issues (Docket No. E-00000A-02-0051), Arizona Corporation Commission, 2002; testimony on affiliate relationships and codes of conduct.

Tucson Electric Power Company's Application for Approval of New Partial Requirements Service Tariffs, Modification of Existing Partial Requirements Service Tariff 101, and Elimination of Qualifying Facility Tariffs (Docket No. E-01933A-02-0345) and Application for Approval of its Stranded Cost Recovery (Docket No. E-01933A-98-0471), Arizona Corporation Commission, 2002, testimony on proposals to eliminate, modify, or introduce tariffs and testimony on the modification of the Market Generation Credit.

Arizona Public Service Company's Application for Approval of Adjustment Mechanisms (Docket No. E-01345A-02-0403), Arizona Corporation Commission, 2003, testimony on the proposed Power Supply Adjustment and the proposed Competition Rules Compliance Charge.

Generic Proceeding Concerning Electric Restructuring Issues, et al (Docket No. E-00000A-02-0051, et al), Arizona Corporation Commission, 2003-2005; Staff Report and testimony on Code of Conduct.

Arizona Public Service Company Rate Case (Docket No. E-01345A-03-0437), Arizona Corporation Commission, 2004; testimony on demand-side management, system benefits, renewable energy, the Returning Customer Direct Assignment Charge, and service schedules.

Arizona Electric Power Cooperative Rate Case (Docket No. E-01773A-04-0528), Arizona Corporation Commission, 2005; testimony on a fuel and purchased power cost adjustor, demand-side management, and rate design.

Trico Electric Cooperative Rate Case (Docket No. E-01461A-04-0607), Arizona Corporation Commission, 2005; testimony on the Environmental Portfolio Standard; demand-side management; special charges; and Rules, Regulations, and Line Extension Policies.

Arizona Public Service Company (Docket Nos. E-01345A-03-0437 and E-01345A-05-0526), Arizona Corporation Commission, 2005; testimony on the Plan of Administration of the Power Supply Adjustor.

Arizona Public Service Company Emergency Rate Case (Docket No. E-01345A-06-0009), Arizona Corporation Commission, 2006; testimony on bill impacts.

Arizona Public Service Company Rate Case (Docket Nos. E-01345A-05-0816, E-01345A-05-0826, and E-01345A-05-0827), Arizona Corporation Commission, 2006; testimony on funding for renewable resources, net metering, green pricing tariffs, and a Power Supply Adjustor surcharge.

Tucson Electric Power Company Filing to Amend Decision No. 62103 (Docket No. E-01933A-05-0650), Arizona Corporation Commission, 2007, testimony on demand-side management, time-of-use, direct load control, and renewable energy.

Consideration, Pursuant to A.R.S. § 40-252 to Modify Decision No. 67744 Relating to the Self-Build Option (Docket No. E-01345A-07-0420), Arizona Corporation Commission, 2008, testimony on the self-build option for Arizona Public Service Company.

Sempra Energy Solutions Application for Certificate of Convenience and Necessity (Docket No. E-03964A-06-0168), Arizona Corporation Commission, 2008, testimony on the overall fitness of Sempra Energy Solutions to provide competitive retail electric service in Arizona.

Tucson Electric Power Company Rate Case (Docket No. E-01933A-07-0402), Arizona Corporation Commission, 2008, testimony in support of the Settlement Agreement regarding renewable energy, demand-side management, Rules and Regulations, partial requirements service tariffs, interruptible tariff, demand response, and bill estimation.

Arizona Public Service Company Rate Case (Docket No. E-01345A-08-0172) Arizona Corporation Commission, 2009, testimony in support of the Settlement Agreement regarding fuel and power supply adjustment provisions, treatment of Schedule 3, demand-side management, and renewable energy.

### **Publications**

Author of the following articles published in the Arizona Labor Market Information Newsletter:

"1982 Mining Employees - Where are They Now?" - September 1984

"The Cost of Hiring" and "Arizona's Growing Industries" - January 1985

"Union Membership - Declining or Shifting?" - December 1985

"Growing Industries in Arizona" - April 1986

"Women's Work?" - July 1986

"1987 SIC Revision" - December 1986

"Growing and Declining Industries" - June 1987

"1986 DOT Supplement" and "Consumer Expenditure Survey" - July 1987

"The Consumer Price Index: Changing With the Times" - August 1987

"Average Annual Pay" - November 1987

"Annual Pay in Metropolitan Areas" - January 1988

"The Growing Temporary Help Industry" - February 1988

"Update on the Consumer Expenditure Survey" - April 1988

"Employee Leasing" - August 1988

"Metropolitan Counties Benefit from State's Growing Industries" - November 1988

"Arizona Network Gives Small Firms Helping Hand" - June 1989

Major contributor to the following books published by the Arizona Department of Economic Security:

Annual Planning Information - editions from 1984 to 1989 Hispanics in Transition - 1987

(with David Berry) "Contracting for Power," Business Economics, October 1995.

(with Robert Gray) "Customer Selection Issues," NRRI Quarterly Bulletin, Spring 1998.

### Reports

(with Task Force) Report of the Task Force on the Feasibility of Implementing Sliding Scale Hookup Fees. Arizona Corporation Commission, 1992.

Customer Repayment of Utility DSM Costs, Arizona Corporation Commission, 1995.

(with Working Group) Report of the Participants in Workshops on Customer Selection Issues," Arizona Corporation Commission, 1997.

"DSM Workshop Progress Report," Arizona Corporation Commission, 2004.

(with Erin Casper) "Staff Report on Demand Side Management Policy," Arizona Corporation Commission, 2005.

"Staff Report on Interconnection for the Generic Investigation of Distributed Generation," Arizona Corporation Commission, 2007.